lük : werks™

User Guide

Digital Video Surveillance System

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1

Welcome to LukWerks

Introduction

Thank you for purchasing the LukWerks Video Surveillance System.

As you already know, LukWerks is a robust video monitoring system for your home or small business allowing you to view live, streaming video from up to six cameras.

State-of-the-art Luk Cameras capture digital-streaming, full-color video and transmits the live feed to the Werks software application, which provides a user interface that is both user-friendly and powerful.

Homeplug® technology uses your electrical wiring to create a high-speed network for communicating with each camera without the complexity of wireless networks and without the need to run network cables.

There are many great features offered in this LukWerks system. For example, consider these:

- 15-minute installation of the entire system.
- Monitor and record up to six locations in real-time.
- Search for, play back, and manage recorded video events.
- Receive email alerts when a camera detects motion.
- Set motion detection zones for each camera.
- View video over the Internet or on Smart Phones.

Here are a few great monitoring applications:

- Monitor your small business
- Watch over a second property
- Record people at your front door
- Monitor the children
- Keep an eye on your pets

The ability to customize camera settings is the highlight of the Werks application. Setup controls allow you to view and modify settings for cameras, motion detection, video, system statistics, email, recording schedule, recently recorded video segments, and disk usage.

Moreover, the system's portable viewing architecture; unique capturing, storing, and reporting functionality; and ability to customize camera settings make it one of the most versatile, usable, and affordable surveillance systems in the industry today.

Overview of LukWerks

LukWerks has three primary components: Smart Cameras, Powerful Software, and Remote Viewing capability. Luk is the name of our cameras and Werks is the name of our software, together they make LukWerks. We call remote viewing My LukWerks.

At the center of the Werks software are components to view live camera video; search for, and play back recorded video; and tools to configure system options. These components, respectively, are Live Mode, Playback Mode, and Setup.

BASIC CONCEPTS

Before we dive into the overviews and how-to's, let's spend a few minutes explaining some basic concepts of the LukWerks system.

1. Easy Setup

One of our first design goals was to deliver a system that you could setup in 15 minutes without special tools, drilling holes, running wires, or configuring networking equipment. It is important to us that you have a great experience right out of the box – one that exceeds the capabilities possible even with a professionally installed home video system.

You complete the setup process in three easy steps:

Step 1 – Install the Werks Software
Step 2 – Connect the USB Receiver Module
Step 3 – Mount Your Luk Cameras

With these easy steps you are up and going. Jump to the chapter on *Getting Started* for more details on the LukWerks setup process. One key to our system is our use of Homeplug technology. Homeplug allows you to turn your existing wiring into a powerful network capable of delivering rich live video from around your property to your PC and from there anywhere you need it.

2. Powerful Cameras

At the heart of each Luk Camera is an imbedded computer that actively encodes, adjusts, and manages your video feed – Luk Cameras are the smartest surveillance cameras available. Because our cameras are so powerful, they provide you with rich features without overwhelming the CPU on your PC.

Some of the one-of-a-kind features available on the Luk Camera include:

- **High-quality video imaging**
- **Digital motion detection**
- **User definable motion detection zones**
- **Auto-image lighting management**
- **Onboard Windows Media Video encoding**

Consider these system scenarios:

Camera	A new way to look
Camera 1	It looks out over the driveway, has Auto Brightness set to on allowing it to automatically adjust to changing light conditions.
Camera 2	It looks out over the backyard, has a defined Motion Detection Zone set allowing it to capture motion only along the top of the fence line.
Camera 3	It monitors the front door and has an Email Alert set, which will send a notification if anyone comes into the house e.g. when the kids come home from school.

Setup allows you to set each camera differently, based on its mission.

3. Powerful Software

At the center of the LukWerks system is the Werks software. It is the most powerful video surveillance software available. Werks can manage full-motion video from six concurrent cameras, providing you

with stunning live views into every camera while simultaneously recording any motion or scheduled events.

Additionally, Werks uses a powerful alerts engine that communicates with your email server to notify up to ten e-mail addresses or cell phones that a camera has detected and recorded motion. When Werks detects motion on a specific camera, Werks will send out an email message, and at your option, you can set Werks to attached either a frame from the captured video or the video segment. The Werks alerts are excellent news for you, but perhaps bad news for your sixteen-year-old son who wants to play around with your new sports car. Your garage camera can send you an email alert if anyone gets close to the car.

Some of the great features of Werks include:

- 6-Camera live view
- Concurrent recording of video from all cameras
- User definable email and cell phone alerts
- Automatic disk storage management
- Powerful video archive search and playback
- Password system security

Werks uses a portion of the disk space on your PC to store the video captured by your Luk Cameras. In the default setup, Werks only records video when there is motion detected by a camera or during times when you have set a fixed recording schedule. In either case, Werks stores each video event as a separate clip to your PC hard drive. Some of these clips may be only a few seconds, while others could last hours. As a Setup option, you specify the maximum amount of disk space allocated to Werks. Once Werks reaches this limit, it makes space for new video clips by removing the oldest clips. With the default camera settings, a typical home system with four cameras will use approximately 2GB of disk space per week.

4. Anywhere Anytime Access

Werks, coupled with our My LukWerks services, delivers a unique Internet services component, which powers the ability for you to view live video from your cameras over the Internet and on video enabled cell phones. At the center of My LukWerks is the LukWerks Remote Viewing Service, which intelligently links you to all of your cameras at each site where you have installed a LukWerks system.

To access the video you first create a My LukWerks user account at www.lukwerks.com. This is part of the normal process of registering you product. With each new LukWerks setup, you register the new site with your existing account. Then when you want to check in on your property, simply login to your My LukWerks account from a Web browser or Windows Mobile cell phone and link to the video feed.

With My LukWerks it is easy to monitor your home, office, cabin, or even grandma's house – anytime anywhere – all from your My LukWerks account.

The following chapters describe in detail each component of the LukWerks system. Two chapters in this book describe in full each of these modules— Chapter 3: Using the Werks Application and Chapter 4: Werks Application Setups, which introduces you to the Werks Setup dialogs.

We have also provided you with online help, support, and service pages on our website. In any case, we are committed to your success.

We are glad to share with you our passion for building great video surveillance products. Over the next months and years, you can expect to see additional cameras, services, and software targeted at giving you – a whole new way to look. **Welcome to LukWerks.**

System Components

LUK CAMERAS

Luk Cameras are the smartest cameras on the market. At their core is a 400MHz processor. Using the processor, they automatically adjust the video picture for changing light conditions (auto-brightness), detect motion, and encode video using Windows Media 9 Video file format.

When the camera detects motion within zones you specify, it alerts Werks to record the event, which it saves to the LukWerks Video folder.

The camera lens sits on a bubble, which you can move to change its viewing angle. Additionally, you can adjust the focus by gently turning the lens clockwise or counter-clockwise as necessary. You should find the focus setting works for most locations.

We designed this Luk Camera for indoor use. However, we specifically designed it to peer out of a window to monitor the out-of-doors using the included suction cup, which you can mount to the front or the back of the camera. Luk cameras can also sit on top a desktop, bookshelf, wall or ceiling using the Desktop Mount or Wall Mount.

The Werks application supports up to six cameras.

OUTDOOR LUK CAMERA

The Outdoor Camera is another option used with the LukWerks Digital Video Surveillance system. Like the Indoor Luk Camera, the Outdoor Camera uses the Werks software and is compatible with other existing Luk Cameras. It is unique, however, from other Luk Cameras because it is weatherproof.

The Outdoor Camera provides the same basic benefits of all Luk Cameras including easy installation, plug-and-play, Homeplug, and a wide range of configuration options for homes and small businesses.

Note: When mounting, install in a nearby electrical outlet that is easily accessible.

CAMERA POWER SUPPLY

The power supply connects to the camera using the provided CAT 5e cable. It serves two functions.

First, the power supply provides power for the camera. Second, it is the network bridge connecting the digital video feed from the camera to the PC running Werks.

There are a few rules you should know about using this unit.

1) Do not plug the power supply unit into a surge suppressor, a UPS, or some other filtering unit. It can be plugged into a regular extension cord or non-surge power strip.
2) Likewise, do not connect the power supply unit or the WiLife camera into other Ethernet or Power-Over-Ethernet (POE) hardware. The Luk Camera and the Luk Camera power supply operate as a pair.
3) The camera will not operate with non-WiLife POE equipment.
4) The unit is designed to be used indoors.

CAT 5E CABLE

The CAT 5e Cable carries DC power from the Camera Power Supply to the camera and provides the network connection for digital data communications to and from the camera. The cable supplied with the LukWerks system was specifically selected because it was small, flexible, and unobtrusive, in comparison to a typical CAT 5e cable.

Note: You can find longer CAT 5e cable cables in our online store at www.lukwerks.com.

RECEIVER

The Receiver module provides the interface between the PC and the power line data link. It communicates with the PC via the USB. The PC sends commands to the cameras to configure and control them. It receives status from these units, as well as the compressed video streams.

The receiver is not powered by the plug.

USB CABLE

The USB connects the Receiver to your PC allowing the network to communicate with the Werks application. It transfers configuration commands to the cameras and receives compressed video streams from them. Communication with the PC is accomplished using a standard USB 1.1 interface.

CAMERA SUCTION CUP

Use the large suction cup to hang the camera in a window. The suction cup connects to the back or front of the camera. If you screw the suction cup onto the back, the camera's lens points into the house. If you screw the suction cup onto the front of the camera, the camera's lens can be directed to monitor a zone outside of the house.

DESKTOP MOUNT BASE

The Desktop Mount Base included in the installation kit is used to place the Luk camera on a flat surface such as on a windowsill, bookshelf, or any other place that is flat and stable.

WALL MOUNT

Using a few screws, the Wall Mount allows you to hang the Luk camera from a wall, ceiling, or other surface to watch a room from a discrete location.

Luk Accessories

NIGHTVISION UPGRADE KITS

The Indoor NightVision 20 and 50 illuminator kits consist of an illuminator and an 80° Day/Night filter lens that can be used with the Luk Camera to capture quality video in low-light areas or complete darkness inside your home or small business. Both IR Illuminators automatically turn on in the dark. The light they produce is not visible to the human eye, but can be seen by the camera.

Remember to verify that the illuminator and camera are in alignment (pointed at the same scene). This is easily checked by repositioning the illuminator in darkness while viewing the image on the PC.

User's Guide Chapters

We designed this manual to be the ultimate resource for learning, understanding, and using the multi-faceted features within the Werks application to meet your personal or small business expectations.

The content of the User's Manual is laid out into five chapters, the first of which you have nearly completed. Here is a brief description of the remaining chapters:

Chapters	Descriptions
Getting Started	This chapter provides comprehensive installation instructions for the Werks software and the Luk Cameras.
Using the Werks Application	Complete description of the great features behind the Live and Playback mode screens. Additionally, this chapter includes "how to" instructions to assist you in learning the system more easily.
Setting Application Options	This chapter introduces you to the Setup and its comprehensive set of configuration options. Here you will learn how to setup: • cameras • motion detection • video capture • email alerts • remote viewing • and other options
Troubleshooting	We do not expect you will have any trouble. However, if you do have a problem, you can find many useful solutions in this chapter.
Configuring Your Firewall	Most PC firewalls automatically prompt you to allow Werks to access the network. Nevertheless, if you find any problems this chapter walks you thorough both automatic and manual configuration options.
Appendices	Finally, we include a few appendix chapters that cover other topics like: System Specifications; Software License and Hardware Warranty; and Safety and Regulatory

The Werks Help System

Click on the [?] icon in the upper-right corner of Werks in order to access the online Help System. The Help System allows you to view topics by clicking through a table of contents, by searching for them using the Search option, or by locating them via a comprehensive Index.

2

Getting Started

Overview

WiLife's Werks application is very easy to deploy because of an installation process that we designed to be user-friendly. Depending on how comfortable you feel installing the application, you can choose to use the QuickStart instructions (found in the Installation Kit) or the comprehensive installation instructions provided in this chapter.

Once Werks has been setup, all you need to do is plug in the cameras and you are on your way to using your surveillance system. The Werks application automatically discovers all the cameras throughout the home and displays the live video stream.

System Requirements

Below you can find the minimum and recommended requirements for systems running cameras using the default QVGA (320 x 240) settings. Running your cameras in the higher VGA (640 x 480) mode requires additional CPU.

Requirement		Number of Cameras					
		1	2	3	4	5	6
CPU Speed	Minimum Recommended	1.0 GHz 1.4 GHz	1.2 GHz 1.6 GHz	1.4 GHz 2.0 GHz	1.6 GHz 2.4 GHz	1.8 GHz 2.6 GHz	2.0 GHz 3.0 GHz
Memory (MB)	Minimum Recommended	256 384	384 512	512 512	512 768	512 768	512 1024
Video Card (MB) DirectX 9 compatible Latest video driver	Minimum Recommended	32 32	32 32	32 64	64 128	64 128	128 256
Display Resolution:		1024 x 768 or higher, 32 bit color					
Hard Drive (MB):		100 MB for program and a minimum of 500+ MB for video recording					
Operating System:		Microsoft® Windows® 2000; Microsoft® Windows® XP Home Edition, XP Professional, or XP Media Center Edition					
USB:		One free USB 1.1 or 2.0 port (2.0 recommended)					
Media Player:		Microsoft Windows Media® Player 9 or later					
Other:		CD ROM drive for installation					

Starter Kit Contents

Before you begin the installation process, please review the contents of the kit to verify that all of the components necessary for a successful install are inside. If any of these listed items are not in the kit, please contact WiLife Customer Support for assistance.

INDOOR STARTER KIT

Werks Installation CD Quick Start Guide USB Receiver	USB Cable (6 ft.) Luk Camera Camera Power Supply	Cat5 Cable (8 ft.) Camera Suction Cup Cable Suction Cup	Desktop Mount Wall Mount Window Decals

OUTDOOR STARTER KIT CONTENTS

Werks Installation CD Quick Start Guide USB Receiver	USB Cable (8 ft.) Luk Outdoor Camera Power cord/plug	Cable Suction Cup Post, Overhang, Wall Mount Window Decals	

Installation Procedures

The following procedures assume that you verified that all of the components of the installation kit are accounted for and that your PC and operating system meet the system requirements described above.

OVERVIEW

Installing Werks in three easy steps:

1) Install Werks Software
2) Complete First Run Wizard
3) Place your Luk Cameras

It is that simple – 1, 2, 3 and you are done.

Step 1 - Run the Install Wizard

Insert the Werks PC Software CD into your PC's CD-ROM drive. The LukWerks setup menu will automatically start.

Note: If the Install Wizard does not automatically load, you can manually start the wizard by double-clicking on the setup.exe file on the CD-ROM (i.e. D:).

Click "Install Werks Software" options.

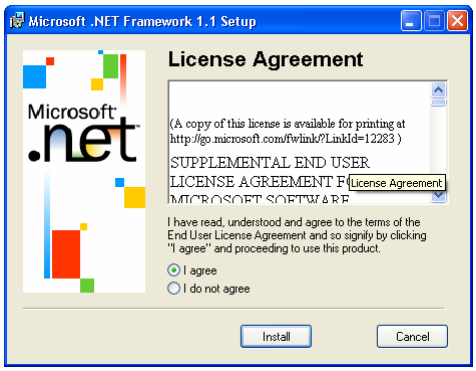
A. Welcome to the Install Wizard

The Werks install is ready to start. Simply click the NEXT> button to begin.

LukWerks - InstallShield Wizard
lük : werks
wilife
Welcome to the InstallShield Wizard for LukWerks
The InstallShield Wizard will install LukWerks on your computer. To continue, click Next.
< Back
Next >
Cancel

A. If necessary, Werks will guide you through the installation of Microsoft .NET Framework

The Microsoft .NET Framework is a collection of tools used by many software programs. Some computers already have Microsoft's .NET Frame installed as part of other applications. For those that do not yet have .NET installed, we will install it now.


Microsoft .NET Framework 1.1 Setup
Microsoft .net
License Agreement
(A copy of this license is available for printing at http://go.microsoft.com/fwlink/?LinkId=12283)
SUPPLEMENTAL END USER
LICENSE AGREEMENT F
License Agreement
I have read, understood and agree to the terms of the End User License Agreement and so signify by clicking "I agree" and proceeding to use this product.
I agree
I do not agree
Install
Cancel

The first screen you will see in the Microsoft .NET Framework Wizard is its license agreement screen, as shown in this graphic.

Complete the License Agreement by clicking on the “I agree” radio button, followed by the INSTALL button.

The system downloads .NET Framework in preparation to moving on with the installation process. A status bar displays, allowing you to view the progress of the .NET Framework install. The install will take several minutes.

When the .NET Framework download is complete, you will need to click the OK button to continue with the LukWerks Install wizard.

B. Completing the Werks Install Wizard

Follow the on screen instructions of the Werks Install wizard. Click the NEXT> button to advance through the installation process.

LukWerks - InstallShield Wizard
License Agreement
Please read the following license agreement carefully.
lük : werks
LükWerks Software License
NOTICE TO USER: BE SURE TO CAREFULLY READ AND UNDERSTAND THIS END-USER LICENSE AGREEMENT ("EULA") BEFORE YOU INSTALL OR USE ANY WILIFE SOFTWARE, FIRMWARE, OR RELATED DOCUMENTATION. BY INSTALLING OR USING ALL OR ANY PORTION OF THE SOFTWARE, YOU INDICATE YOUR ACCEPTANCE OF EACH OF THE TERMS OF THIS LICENSE. YOU AGREE THAT THIS LICENSE WILL BE A LEGALLY BINDING AND ENFORCEABLE CONTRACT LIKE ANY WRITTEN AGREEMENT SIGNED BY YOU. THESE TERMS APPLY TO YOU AND TO ANY
I accept the terms of the license agreement
I do not accept the terms of the license agreement
Print
InstallShield
< Back
Next >
Cancel

Follow the on screen instructions of the Werks Install wizard. Click the NEXT> button to advance through the installation process.

One of the early steps is the LukWerks License Agreement screen.

Please take a moment to review the license agreement. If you accept the terms of the agreement, click the “I accept the terms in the license agreement” radio button and then click NEXT>.

If you do not agree with the terms of the agreement, click the "I do not accept the terms in the license agreement" radio button and the installation will be terminated.

> Note: A copy of the license agreement can be found in two places: 1) In this user guide; and 2) on the program CD. The filename is License.htm.

You will also have the opportunity to change the destination folder of the Werks System. The default location is C:\Program Files\LukWerks.

Step 2 – Complete the LukWerks Setup Wizard

As LukWerks starts for the first time, the LukWerks Setup Wizard will display automatically. The LukWerks Setup Wizard will help you set up the following:

- Set disk usage options
- Create a remote viewing account
- Test your system configuration
- Connect the USB adapter and camera(s)
- Name your camera(s)

Click Next> to begin the Setup Wizard.

LukWerks Setup Wizard
Welcome to LukWerks
Over the next few minutes we will help you configure your LukWerks system.
Configuration Steps:
Set disk usage options
Create a remote viewing account
Test your system configuration
Connect to your cameras
Name your cameras
Click the Next button to continue
< Back
Next >
Cancel

Set Disk Usage Options Screen

The Set Disk Usage options window allows you to set two things:

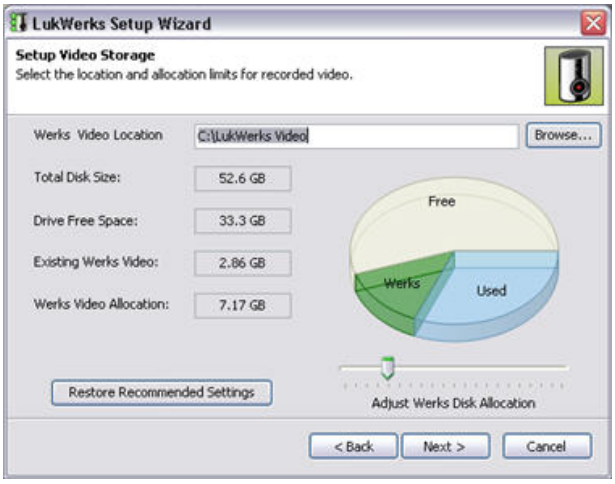
1. Location for video storage.

2. The amount of disk space allocated for Werks video storage.

The screen lists and shows you how much Free and Used space is on your PC. If your PC already has video files stored on it, the amount saved will display in the "Existing Werks Video" field.

The Setup Wizard automatically sets the Werks Video Allocation at an amount that is 20% of the total free space, or to the amount of the Existing Werks Video files, whichever is greater.

You can adjust the setting by moving the status bar above "Adjust Werks Disk Allocation."



When you have finished setting disk allocation, click Next>.

SET UP REMOTE VIEWING ACCOUNT

This screen allows you to enable remote viewing on Internet-connected machines.

What is remote viewing? It is the ability to access live video from your cameras from anywhere in the world using a Windows® Media enabled Internet browser or cell phone.

The default option on this screen is to create a new remote viewing account. If you want to create a new account, simply click Next>.

If you already have an account and want to use the existing account to view the cameras on this new network, click the radio button for "Use existing remote viewing account" and click Next>.

Click "Do this later" to skip this option.

To read more about remote viewing, see Chapter 5.

LukWerks Setup Wizard
Setup Remote Viewing Account
Enable remote viewing on Internet-connected machines.
With a My LukWerks account, you securely view live video from your cameras over the Internet using a web browser or Windows Mobile cell phone.
Create new remote viewing account
Use existing remote viewing account
Do this later
Remember: Your LukWerks PC acts as the video server and uses your broadband Internet connection to securely publish your camera video for remote viewing.
< Back
Next >
Cancel

TELL US ABOUT YOUR SYSTEM

This screen allows you to specify the number of cameras you are putting on the system with this install and how they are connected to the computer, i.e. via a WiLife USB Adapter, Other HomePlug Powerline Adapter, or Non-Powerline LAN. (Typically, the answer to this last question is the WiLife USB adapter.)

LukWerks Setup Wizard
Tell Us About Your System
Answer the questions below about your LukWerks system setup.
Number of Cameras
How many cameras are in your LukWerks system?
1
Connection Method
How are your cameras connected to your computer? (Usually it is the WiLife USB adapter.)
WiLife USB Adapter
Other HomePlug Powerline Adapter
Non-Powerline LAN
< Back
Next >
Cancel

PLUG IN YOUR POWERLINE ADAPTER

Now, you are ready to plug in the USB Receiver.

1) Plug the USB Receiver Module directly into a wall outlet near your PC.
2) Use the included USB Cable to connect the USB Receiver Module to one of the available USB ports on your PC.
3) Click the NEXT> button when you are done.

Note: The USB Receiver Module has built in surge protection and must be plugged directly into your wall outlet. It is highly recommended that you do not plug the USB Receiver Module into a surge protected power strip. Plugging the USB Receiver Module into a surge protected power strip may reduce the quality

LukWerks Setup Wizard
Plug in Your Powerline Adapter
Prepare your computer to receive camera video
Plug your USB Receiver into a wall outlet and connect to a USB port on your PC.
Do not plug the Receiver into a surge protector.
< Back
Next >
Cancel

and performance of the LukWerks system.

PLUG IN YOUR CAMERA

With the receiver plugged into your electrical outlet, you are ready to plug in your cameras.

LukWerks Setup Wizard
Plug in Your Cameras
Position cameras for video surveillance.
Connect your cameras to their power supplies and plug them into a nearby outlet.
Do not plug cameras into a surge protector - they have one built in.
Use one of the many convenient mounting options.
< Back
Next >
Cancel

1) Start by installing your cameras in a location near your PC. This makes it easier to adjust the focus if necessary. Once you have focused your camera, select a new location for the camera and use one of the convenient mounting options to place your camera on a desktop, window, or wall.

Installation Note: If mounting the camera on a window, clean the area of the window where the suction cup will be attached. Let the area dry completely before mounting camera.

The Window Mount Suction Cup has been tested and proven to hold the weight of objects heavier than the camera for extended periods of time. To ensure long term connection, you can spread a very small drop of vegetable or olive oil on the under-side of the cup before applying it to the window. This increases the suction power of the cup.

CAUTION: The Luk camera should be mounted indoors or in a weatherproof enclosure. Additionally, you should not point the camera directly at the sun. Failing to follow either of these warnings will damage your camera.

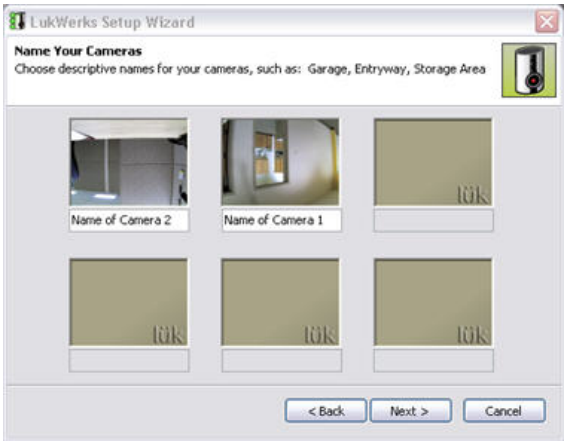
2) Plug the Camera Power Supply into a nearby outlet. Then, use the included Camera Cable (8 ft. Standard Ethernet Cable) to connect the power supply to the camera.

Note: The Camera Power Supply has built in surge protection and must be plugged directly into your wall outlet. Plugging the Camera Power Supply into a surge protected power strip may reduce the quality and performance of the LukWerks system.

3) Click the NEXT> button to proceed.

NAME YOUR CAMERAS

Simply name your cameras by clicking inside the text field under each video panel and entering the desired name. Suggestions for names might be: Garage, Entryway, Foyer, Kitchen, Storage Area, Front Door, Porch, Family Area, etc.


LukWerks Setup Wizard
Name Your Cameras
Choose descriptive names for your cameras, such as: Garage, Entryway, Storage Area
Name of Camera 2
Name of Camera 1
< Back
Next >
Cancel

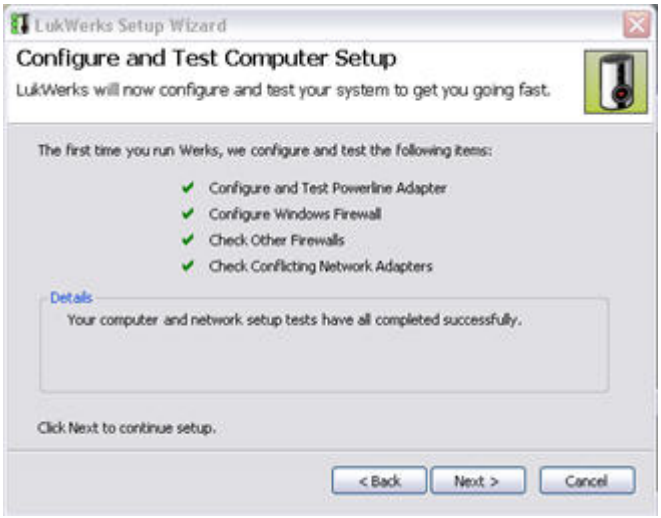
Firewall Setup

It is very likely that you have one of many Firewall applications running on your computer. These applications protect your computer from unwanted network connections, which sometimes are the result of viruses. Because Werks creates a new network using your home wiring and uses your Internet connection for email and remote viewing, you will need to configure your firewall to allow these connections.

The Setup Wizard will attempt to configure the firewall used on your system.

If needed, we have provided an entire chapter titled *Configuring your PC Firewall* that you can use as an aid.

Most firewalls will prompt you to Allow or Block access to the network by Werks. You should always choose Allow when the program reads "Werks."

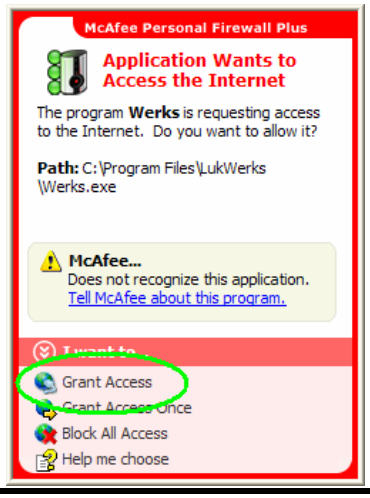

LukWerks Setup Wizard
Configure and Test Computer Setup
LukWerks will now configure and test your system to get you going fast.
The first time you run Werks, we configure and test the following items:
Configure and Test Powerline Adapter
Configure Windows Firewall
Check Other Firewalls
Check Conflicting Network Adapters
Details
Your computer and network setup tests have all completed successfully.
Click Next to continue setup.
< Back
Next >
Cancel

ATTENTION: If you are using Norton Firewall or Norton Internet Security, you must review the *Norton Internet Security by Symantec* section of the chapter *Configuring your PC Firewall*. Simply accepting the automated prompts may be insufficient.

- If you are running Windows XP Service Pack 2, the Windows Security Alert screen may appear. Click on the Unblock button to allow Werks to run properly. (A sample screen shot of the Windows Security Alert displays below.)
- If McAfee Personal Firewall Plus or Standard is running on your Windows XP, a warning message is going to display as Werks starts. This message is going to inform you that Werks wants access to the Internet. You need to click "Grant Access" in order for Werks to run properly. (A sample screen shot of this McAfee Firewall message displays below.)
- If you are using other anti-virus or firewall software, similar warning messages may appear, asking you whether you want to allow Werks to perform certain functions. You should allow the requested permissions so that Werks runs properly.
- If you find you are having problems, reference the chapter on *Configuring your PC Firewall.*

Windows Security Alert
To help protect your computer, Windows Firewall has blocked some features of this program.
Do you want to keep blocking this program?
Name: Werks
Publisher: WiLife
Keep Blocking
Unblock
Ask Me Later
Windows Firewall has blocked this program from accepting connections from the Internet or a network. If you recognize the program or trust the publisher, you can unblock it. When should I unblock a program?

Windows Firewall Auto-Alert


McAfee Personal Firewall Plus
Application Wants to Access the Internet
The program Werks is requesting access to the Internet. Do you want to allow it?
Path: C:\Program Files\LukWerks \Werks.exe
McAfee...
Does not recognize this application.
Tell McAfee about this program.
Grant Access
Block All Access
Help me choose

McAfee Auto-Alert Message

Additional Cameras

You can have up to six Luk Cameras in each LukWerks system. Adding new cameras is easy. Check our website periodically for news regarding any new cameras being released.

STEP 1 – POSITION YOUR CAMERA

a. Select a location for your camera.

Use one of the convenient mounting options to secure your camera to a flat surface, window or wall.

Note 1: If mounting the Indoor camera on a window, clean the area of the window where the suction cup will be attached. Let the area dry completely before mounting the camera. (The Window Mount Suction Cup has been tested and proven to hold the weight of objects heavier than the camera for extended periods. To increase the suction power of the cup, spread a small drop of vegetable or olive oil on the underside of the cup before applying it to the window.)

Note 2: When mounting an Outdoor camera, install in a nearby electrical outlet that is easily accessible.

b. Plug the Camera Power Supply into a nearby outlet.

Use the included Camera Cable (8 ft. standard Ethernet cable) to connect the power supply to the camera.

Note: The Camera Power Supply has built-in surge protection and must be plugged directly into your wall outlet. Plugging the Camera Power Supply into a surge-protected power strip may reduce the quality and performance of the LukWerks system.

STEP 2 – IDENTIFY THE NEW CAMERA IN WERKS

There are two choices of setup paths – a and b. So, read both before moving on with the procedure:

a. You did NOT set a custom password

If you have NOT set a custom camera password, then you do not need to do anything more. Werks will automatically recognize the camera within 1-2 minutes.

Once the camera appears, you can change its configuration, set a name, or adjust the picture options. (See the chapter on *Setting System Options* for information on these settings.)

b. You did set a custom password

If you HAVE set a custom camera password, you need to complete a few additional tasks. This is necessary because new cameras are shipped with no password (different from the custom password you have set). Therefore, Werks will not automatically identify it.

Follow these instructions to include the new camera into your Werks system:

1) Go to the Werks > Setup > Advanced dialog screen.
2) Click the Find My Cameras button.
3) Complete the Find My Cameras Wizard.

Note: We recommend that you set a custom password because a custom camera password provides you with security from others having access to your streaming video.

Camera Focus and Aim

The factory default settings work great for most applications. However, if you find you need to adjust the camera it only takes a few minutes. It is easiest to focus and adjust the camera from an outlet near your computer. The Luk Cameras have two components that allow you to adjust the camera's viewpoint and focus: the camera eyeball and the lens.

On the back panel, you will notice an adjustable eyeball. Use this ball to change the angle of the camera lens.

To adjust the focus, gently twist the lens on the front of camera to the right or left. You may find it easiest to take your camera back to your PC to do this work – saving you the trouble of walking back and forth.

Product Support

If you have any questions about the installation procedures, please check out the support section of our website for the most recent information. If you still need help contact LukWerks Technical Support via email at support@lukwerks.com, or by phone at 877- LUKWERKS [(877) 585-9375] (for customers within the United States and Canada).

Tip of the Day

Werks displays a Tip of the Day dialog window, as shown in the graphic below.

This dialog displays each time Werks is started.

By default, the "Show tips at startup" is checked. You can un-check this so that the tips dialog window won't display at startup.

To show the Tips of the Day dialog, right-click on the "?" button in the upper-right corner of the Werks system and click on Tips of the Day.

There are currently about 25 tips that you can cycle through.

Werks Tip of the Day
Did You Know...
You can create 16 motion detection zones for each camera.
When you have the Setup > Recording dialog open, Werks enters a special mode that allows you to create, edit or delete motion zones directly on the Live video image. You must be in Live mode to view or change your motion zones.
Click here to learn more...
Show tips at startup
Next Tip
Close

3

Using the Werks Application

Overview

Werks provides a powerful-but-simple interface for managing cameras, recording video, tracking alerts, and configuring remote viewing. Once you learn a few of the basic elements, most operations are easy and intuitive.

Two operating modes: Full and Background

The Werks application has two operating modes: Full and Background. In Full Mode, Werks provides you with a complete Windows interface, making it easy to monitor and manage your video feeds. In Background Mode, Werks closes its Windows interface and displays a small icon in the system tray. While running in Background Mode, Werks continues to record video, using very little CPU. This allows you to use all of your normal applications, even on a minimally configured machine. Background Mode is another great feature of the LukWerks system.

Two main views: Live and Playback

The Werks Windows interface has two main views: Live and Playback. The Live View allows you to monitor and manage the live camera feeds. The Search View allows you to find, view, and manage recorded video segments.

The title bar and the main feature buttons Setup, Live/Search, and WILIFE, appear in both the Live and Search Views.

Some Application Features	
Live View	**Playback View**
View live video	Play video clips
Arm email alerts	Delete segments
Turn cameras on/off	Protect segments
Email a current image	Print images

Title Bar Controls

The Werks Title Bar in the upper-right corner of the application lets you view Help, Hide the on screen controls, Minimize Werks, or run Werks in Background Mode.

Open Werks Help

Hide/Show Controls

Minimize to Taskbar

Close – run in Background

When you click the X button, Werks changes to Background Mode. A system message will let you know that Werks is still running and recording in the background.

Main Feature Buttons

These three buttons control some of the key functions of the Werks application. The SETUP button opens the Setup Control Panel where you control all of the configuration options. The Search/Live button switches between the Search View and the Live View. (Notice that in Live View, the middle button reads GO TO PLAYBACK, and when in PLAYBACK View, the middle button reads GO TO LIVE – thus allowing you to switch back and forth.) The WILIFE button takes you to the LukWerks website, where you can login to your My LukWerks account. (See the *Werks Setup* chapter to learn more about camera and program configuration options.)

Live View

The Live View is the first screen that appears when you open Werks. From here, you can monitor live video feeds, change screen layouts, and enable and disable cameras and email alerts. This is a screen shot of the Live View, showing the components of the screen.

Inspect the Video Windows

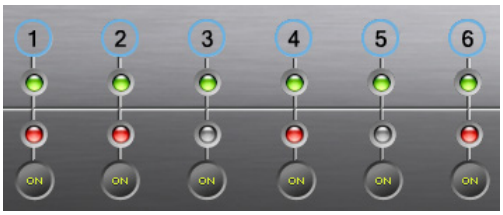
Werks can display between 1 and 6 video windows depending on your choice of Viewing Modes. Each video window in the Live View displays live feeds from your cameras. The text in each video window shows the camera order (C1-C6), camera name, and camera status. If the camera is recording, the status message reads (Live/Rec) in place of just (Live).

Choose a Multiple-Camera View

Werks allows you to select between 3 viewing modes: single-camera, quad-camera, and six-camera. Video feeds are tiled and sized to fit in the available display area. Quickly switch between multi- and single-camera views by clicking on the video window.

Use the Camera Activity Panel

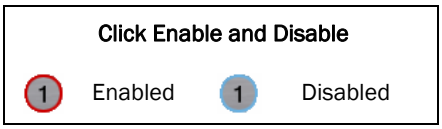
The Camera Activity Panel allows you to monitor all your cameras at a glance. It shows you which cameras are connected, set for email alerts, and recording. From this panel you can also quickly turn cameras on/off and enable/disable email alerts.



1	Blue circle shows email alerts are disabled; click to enable.	1	Red circle shows email alerts are enabled; click to disable.
	Green light shows camera is streaming video		Gray (no light) Camera is not streaming video. No recording is taking place.
	Red light shows Camera is recording.	ON	ON (Black) Camera has been detected for this camera number in the past but is not detected now.
ON	ON (Yellow) Camera is ON; click to turn OFF.	OFF	Camera has been disabled in Live view. Click to turn ON.
	(BLANK) No camera exists for this number.		

Enable and Disable Alerts

Once you setup your email alerts you can quickly set the alert state from the main view. This feature is great for enabling email alerts as you leave for work or on a vacation, and turning them back off once you get home (no need getting email indicating you're moving around your house).



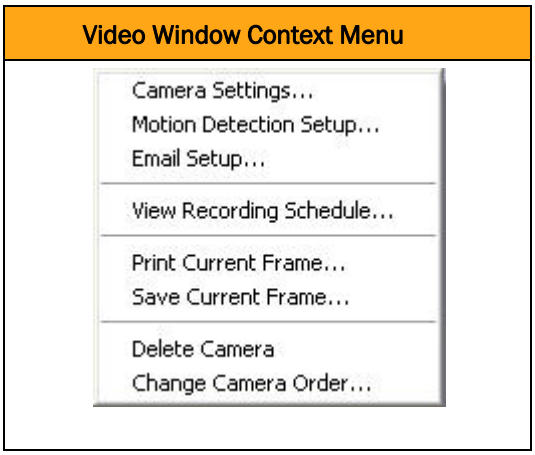
From the main Live View, you Enable and Disable Email Alerts by clicking on the camera number – 1. When the outer circle is blue, email alerts are disabled. When the outer circle is red, email alerts are enabled. You can also enable and disable alerts from the Enable Alerts checkbox from the Setup...Email options dialog. (See *Email Options* in the *Werks Setup* chapter for more details.)

Switch Cameras On and Off

At times, you may want to easily turn cameras off. Perhaps you are having a family party in the backyard and there is no reason to record all the activity. To turn a camera On and Off, click the On/Off button below the camera number. When the button reads On – ON – the camera is operating normally. When the button reads Off – OFF – the camera video feed is disabled until you click the button again.

Open the Video Context Menus

Werks provides quick access to common functions through context menus on the Video Windows and Camera Alerts buttons. To access the context menus simply right-click on the object and choose between the various commands. Here's what they look like:



Camera Alerts Context Menu
Setup Email Alerts
Enable Email Alerts
Disable Email Alerts
Enable Email Alerts for All Cameras
Disable Email Alerts for All Cameras
Set Alert to "Do Nothing"
Set Alert to "Send Text Only"
Set Alert to "Send Video Frame"
Set Alert to "Send Video Segment"

Print or Save Live Video Frames

Using the Video Window context menu (right-click on one of the windows in the Live mode), you can choose to print or save the current image displaying in the window.

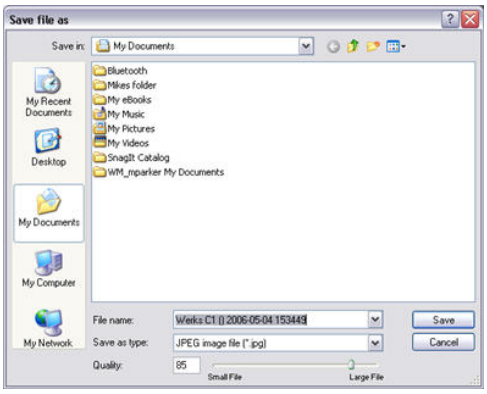
Print a Current Frame

When you select Print Current Frame, Werks uses the Windows print interfaces, which will automatically try to adjust the picture to match your printer's capabilities. You may not get great results when printing to a black and white printer. You find these options only on the live view context menu.

Save a Current Frame

When choosing Save Current Frame, Werks gives you the ability to save a current frame in four formats: JPEG, BMP, PNG, and TIFF.

If you select to save the frame in JPEG format, you have the ability to select the quality setting by entering a quality figure (from 1 to 100%) or manually moving the quality bar, as shown in the graphic below.



The default name of the file represents the camera name and date. However, you can change the filename.

Werks also remembers the last file type you selected, the directory you saved the last image to, and the quality options you selected. It will use these as defaults the next time you save a current frame and let you choose the location and filename for the image, which it stores as a JPEG. By default, Werks will choose your My Pictures folder.

Change Camera Order

In the Live view, Werks displays each camera's "feed" in order of the camera's number. For example, if the Live view is set to display the feed from four cameras, then the lowest camera number (i.e., camera 1) would display in the upper-left corner; camera # 2 would display in the upper-right corner; camera #3 would display in the lower-left corner; and camera #4 in the lower-right corner.

In Live mode, in the 4- or 6-camera window mode, left-click and drag one of your camera images to a different window and let it go. This automatically changes the camera order. In the graphic below, camera 2 is being dragged into the window for camera 1.

Delete a Camera

From time-to-time you may remove a camera from your system. Werks by default saves the settings and position of this camera, expecting that you may add it back to your system. In some cases you may permanently move a camera to another location. In these cases, you may want to delete the camera from the Werks database.

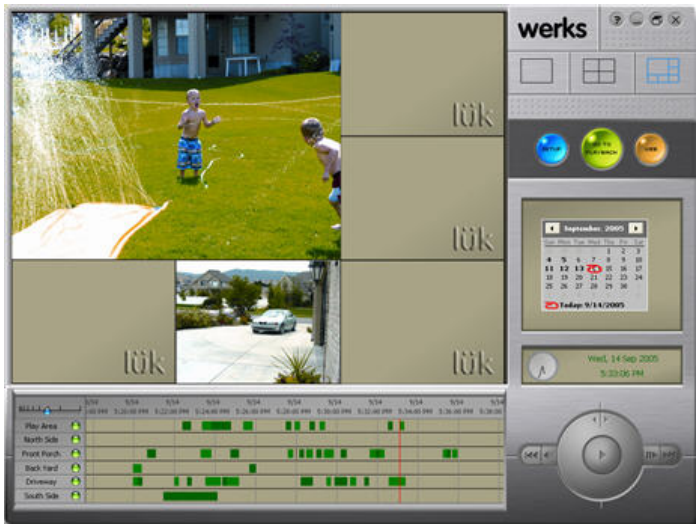
If the camera is still connected, you can use the Live Windows context menu to delete a camera. Follow these simple instructions:

1) Make sure the camera is not plugged in, to prevent it being rediscovered by Werks.
2) Select the "Delete Camera" option.

Note: You can delete a camera from the Setup > Camera tab screen. Simply select the camera tab and then press the Delete button.

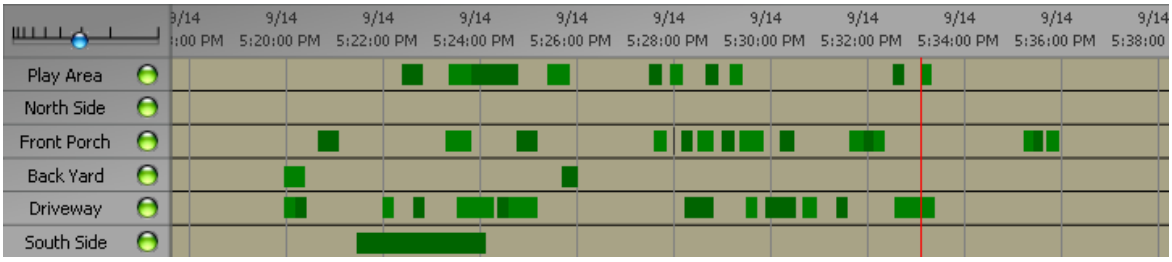
Playback View

Playback View allows you to find, view, and manage your recorded video segments, which Werks stores in a database on your computer. Your cameras create these segments according to your settings. By default, each camera is set to record when motion is sensed. You can also set the camera to record continuously during specific times or inhibit recording using the Recording Scheduler. (See *Recording Options* in the *Application Setup* chapter for more details.)



Review Stored Video Segments

The Playback Navigation window provides fast access to recorded video segments using the mouse or keyboard. The Playback Navigation window consists of the following components: Window Timescale, Date/Time Header, and the navigation window, which displays the camera name and the recorded video segments captured for each camera. (Video segments will display as alternating light and dark green shaded bars to better distinguish between video segments recorded consecutively.)



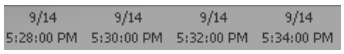
To navigate through the segments, use one of these operations:

- Click on the desired date and time
- Click and drag the red position line to the left or right, beyond the edge of the window
- Click on a date in the calendar
- Use ← and → to step forward and backward through video segments

See the section on *Hot Key Assignments* for more keyboard controls.

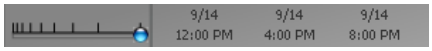
CHANGE DATE/TIME WINDOW TIMESCALE

To navigate using the Date/Time Header, left-click and drag your mouse on the header area above the time-lines. (This is the area with the dates and times.) Drag the time-line left or right and the whole thing moves. And you can even keep dragging beyond the limits of the time-line if you want to!

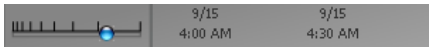


The top of the Search Navigation window displays dates and times for each time division. These divisions can be easily changed to zoom in to specific minutes of a day or zoom out to view an entire day.

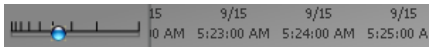
Change the time focus by clicking on the timeframe guide to select your focus. A tool tip message informs you of the time division you have selected. Notice the position of the focus indicator (blue ball) in these examples:



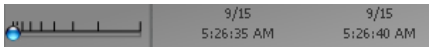
4-hour time focus



30-minute time focus



1-minute time focus



5-second time focus

NAVIGATING WITH RED TIMELINE

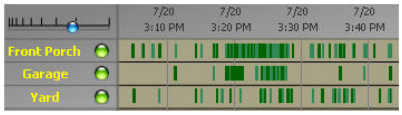
A vertical red time-line shows the current position of playback. To navigate, click and drag on the time-line to the left or right until you see the time and date you want to playback. Then release the mouse button.

Notes:

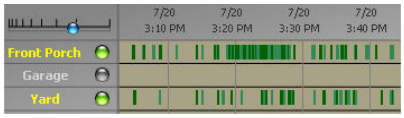
- You may also click anywhere on the navigation window and the red time-line will go directly to that spot.
- Use CTRL f and CTRL g to step forward and back through video segments. See Hot Key Assignments for more keyboard controls.
- You can drag the timeline beyond the left or right edge to show the whole timeline.
- You should not attempt to drag the timeline while video is being played. Stop video and then drag the timeline.

SELECT CAMERAS TO REVIEW

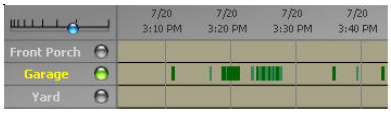
When playing video segments, you can select one, several, or all cameras for review. By default, all cameras are selected. Selecting only a few cameras reduces the volume of video that must be loaded into memory before playing clips. This may improve performance on minimally configured machines. Here are a few examples:



All cameras on



Garage camera off, others on

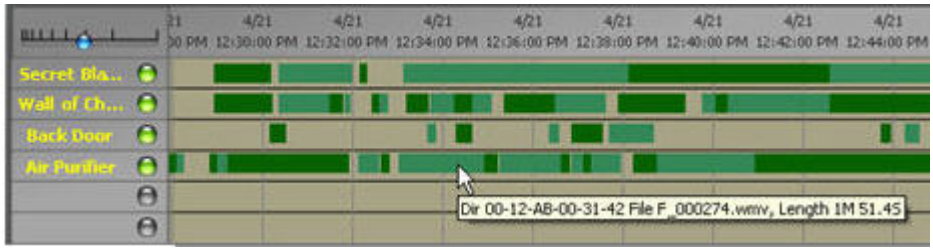


Garage camera on, others off

To turn on or off the video for a camera, click the green icon next to the camera name.

SEEING VIDEO SEGMENT FILE DETAILS

Press the Ctrl button or move your mouse over a video segment in the playback navigation window. The system will display a tool tip that will name the directory the file is saved to; the filename; and the length of the video segment. The graphic below shows this feature.



QUESTIONS

What do the colored buttons next to the camera names mean?

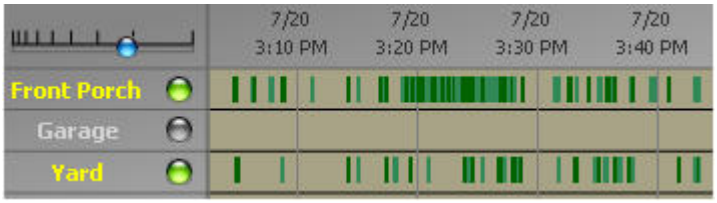
- A green button signifies that the camera is enabled for Playback mode.
- A gray button indicates the camera has been disabled for Playback mode. The green and red video segments will not display.

These are inter-active buttons. You can turn the video for a camera On or Off from. To turn Off the video for a camera, for example, click the green button next to the camera name.

What do the colored camera names mean?

- Yellow camera names represent cameras that are enabled for Playback mode.
- Gray camera names represent cameras that have been disabled for Playback mode.

The following graphic shows an example of this feature:



CHANGE REVIEW DATE

In Search mode, the Calendar is on the right side of the display. The current day is circled in red. Days in which video segments were recorded appear bold. You can click on any of those days to display all of the video segments in the time grid. You can also click on the month or year to change those items.

The Calendar has arrow buttons at the top to navigate forward or backward through the months.

Play Video with Onscreen Controls

Like any DVD player, the Playback Controls allow you to play, pause, adjust speed, and step-through your video segments. You use the controls by clicking on each one. If you hold your mouse over the control, Windows will display a tool tip, indicating the name of each control. We also provide keyboard controls which we describe below.

Use the following list of icons and descriptions to help you understand how to navigate through recorded video segments.

Button	Description	Button	Description
	Click to play video		Click to pause video
	Go to the start of the last (or current) video segment		Go to the start of the next video segment
	Step back		Step forward
	Video slow motion (turn jog dial counter-clockwise)		Video fast motion (turn jog dial clockwise)

Use Keyboard Playback Controls

Werks has several keyboard shortcuts, which allow you to quickly navigate through video clips. Some navigation features are only available through the keyboard controls.

Hot Key	Description	Hot Key	Description
S	SWITCH MODE. Change to Search Mode from Live Mode	L	SWITCH MODE. Change to Live Mode from Search Mode.
P or CTRL P	PLAY and PAUSE. Start and stop playing recorded video.	F1	HELP. Display Werks online help files.
C or CTRL C	CENTER CURSOR. Sets timeline origin so cursor is centered	N or CTRL N	NOW BUTTON. Sets cursor time to now.
SHIFT +	PLAY FASTER. Increase playback speed	SHIFT -	PLAY SLOWER. Reduce playback speed
- or CTRL -	INCREASE MAGNIFICATION. Increase timeline magnification	+ or CTRL +	REDUCE MAGNIFICATION. Reduce timeline magnification
CTRL ←, ←, or CTRL B	PREVIOUS SEGMENT. Move cursor to start of next earlier recorded segment	CTRL →, →, or CTRL F	NEXT SEGMENT. Move cursor to start of next later recorded segment
SHIFT ← or ↓	SLIDE CHART EARLIER. Slide chart to earlier time	SHIFT → or ↑	SLIDE CHART LATER. Slide time chart to later time
CTRL-SHIFT ←	JUMP CHART EARLIER. Move timeline one screen earlier	CTRL-SHIFT →	JUMP CHART LATER. Move timeline one screen later in time
PAGE UP	NEXT DAY. Move timeline to next day.	PAGE DOWN	PREVIOUS DAY. Move timeline to previous day

Open the Context Menu

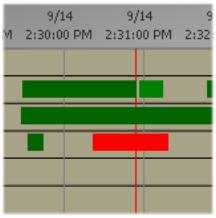
While playing through recorded video segments in Playback Mode, you can right-click on an active video window to access the context menu.

This menu allows you to perform some operations that are not available from any other screen. These choices include options for managing segments, printing and saving, and emailing.

Each of these operations applies to the current video segment. To manage a different video segment, click on the segment in the Playback Navigation window.

Playback Window Context Menu

Protect a Recorded Video Segment

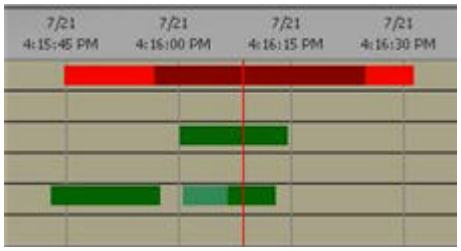


Werks automatically deletes old files as it reaches its disk storage limit. It does this by deleting the oldest recorded video segments to make room for the new video. In some cases, you may have a segment that you want to protect for an extended length of time.

To protect a segment, navigate to the segment so that it is paused in the playback window. Next, right-click on the video window to reveal the playback context menu and

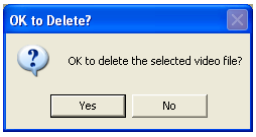
choose Protect Video Segment. You can easily identify a protected video segment because it will show red rather than green in the navigation window. (See *Managing Disk Usage* in the chapter on Werks Options for more details on disk space usage.)

> Note: You can also protect a video segment by right-clicking on a green video segment in the timeline and selecting Protect Video.
>
> When two or more consecutive video segments are protected, the timeline will display them using two different shades of red, as is shown here.



Delete Recorded Video

To quickly delete a video segment that you do not want to keep in your library, navigate to the segment so that it is paused in the playback window. Next, right-click on the video window to reveal the playback context menu and choose Delete Video Segment.

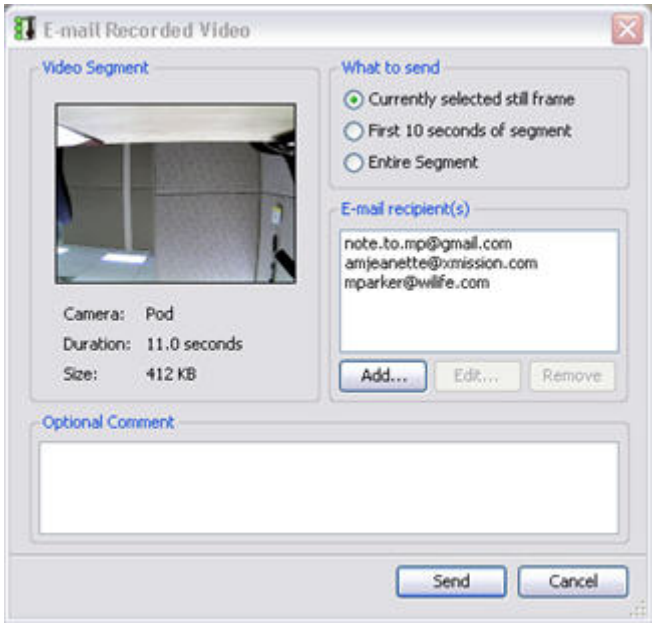


Print or Save Recorded Video

Printing or saving (save as) a video is simple. First, navigate to the segment so that it is paused in the playback window. Next, right-click on the video window to reveal the playback context menu and choose the Print Current Frame, Save Current Frame, or Save Current Segment option. If printing, you will be asked which printer to use. If saving, you will be asked to specify a location and file name for the frame or segment.

Send Email

> Note: The Mail Server must be configured on the Setup > Email screen before you can use this feature.



In the Playback mode, right-click on any video panel and select the option “Send Email” from the list of options. The E-mail Recording Video window displays. This screen allows you to distinguish what type of email you are sending and to whom you will send it. These are your options:

- Send selected still frame, first 10 seconds of video, or the entire video segment
- Select or enter which email addresses to send video
- Add a comment for the email

The E-mail Recipient(s) section works like the E-mail Alert list on the Email Setup screen, with Add/Edit/Remove buttons. By default, the E-mail recipient(s) list displays the addresses entered in Email Alert list, found on the Email tab screen of Setup. If you add and/or modify the list of addresses in this dialog window, the system

remembers it and keeps these addresses for the next time you send video via email.

ADDING AN EMAIL ADDRESS

1) Click the ADD... button. The Add Email Recipient screen displays.
2) Click the Email Address radio button.
3) Enter your email address in the available field.
4) Click OK. The email address is added to the list of Email/cell phone addresses.

Note: You can send a video to a cell phone by clicking the Mobile Phone radio button and entering the cell phone number in the appropriate text boxes.

EDITING AN EMAIL ADDRESS

1) In the Email Recipient(s) window, click on the email address you want to modify.
2) Click the Edit... button. The Edit Email Recipient window displays, with the address you want to modify showing in the text field.
3) Modify the address and then click OK. The modified address is added to the list.

REMOVING AN EMAIL ADDRESS

1) In the Email Recipient(s) window, click on the email address you want to delete, so that it is highlighted.
2) Click the Remove... button. The email address is removed from the list of email recipients.

Remote Viewing with My LukWerks

With My LukWerks, you can monitor nearly-live video feeds from all of your LukWerks Systems over the Internet to Windows Mobile enabled cell phones, Internet Browsers, and other devices that support Windows Media 9 Video. You may have set up this feature when you ran the Setup Wizard. If you did not set it up at that time, please complete these steps to activate:

1) Connect your Werks PC to the Internet using a high-speed service like DSL or Cable Broadband.
2) Create a My LukWerks user account at www.wilife.com/register.
3) Setup the Remote Viewing options on the Werks Setup>Remote dialog.

Additionally, you can register several sites – your second home, the office, and grandma's house – with your account. This allows you to quickly check all of your LukWerks installations.

Once you have configured your PC and online account, you are ready to enjoy remote viewing. Remote viewing lets you monitor your property from anywhere anytime.

Use Remote Viewing

When you enable Remote Viewing, the Werks PC becomes a video server ready to publish video through the secure LukWerks network over the Internet to you, wherever you are. LukWerks intelligently creates the most efficient path through your local routers to your remote device. You connect to your video feed by going to www.wilife.com and logging into your My LukWerks account – using your username and password (or PIN for cell phones). Once connected to your account, you select the site and cameras you want to view. The LukWerks server then routes a live video feed to your device. For more information, please go to the chapter Remote Viewing.

Background Mode and Exit

As mentioned earlier, Werks has two operating modes: Full and Background. While running in Full Mode you have full access to the complete Windows interface. In Background Mode, Werks runs silently in the background and displays a simply icon in the system tray.

Switch between Background and Full Screen

From the full screen view, you can tell Werks to run in Background Mode using one of two methods:

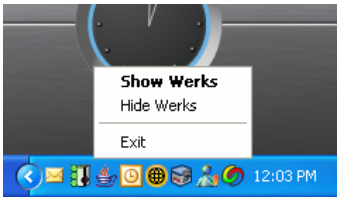
1) Click the close box – ⊗ – in the upper right-hand corner of the screen

   Click the Werks icon in the system tray and choose Hide Werks

In Background Mode, Werks continues to record video, but uses only a small amount of system resources. This allows you to use all of your normal applications on a minimally configured machine. Background Mode is another great feature of the LukWerks system.

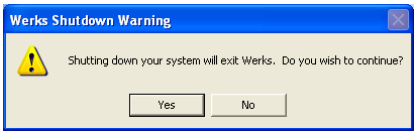
From Background mode, you open the full user interface by following these steps:

2) Click on the Werks icon in the system tray
3) Choose the Show Werks option (as shown)



Exit Werks

It is obvious that Werks does not record when your computer is not running. If you shutdown your computer while Werks is running, you will see a message reminding you that you are closing Werks as well. The goal is to remind you that you are also closing your surveillance system.



To exit Werks follow these steps:

- Click on the Werks icon in the system tray
- Choose Exit from the menu

Remember that clicking the close box – ⊗ – only closes the Windows interface, and Werks will continue to run in Background Mode.

4

Setting System Options

The default configuration of your LukWerks system provides you with all of the basic features activated allowing you to have your own professional video surveillance system running in minutes. However, Werks gives you the ability to change the settings in order to enable additional features like email alerts and remote viewing. You find these options in the Werks Setup dialog, which you access by clicking the SETUP button from the Live or Search windows.

Overview of Werks Settings

Using Setup is really quite simple and intuitive. Simply click on the SETUP button on the main window. You find this button next to the GO TO LIVE or GO TO PLAYBACK button. Additionally, you can right-click on one of the video windows and choose one of the options we display. They too will lead you into Setup.

Setup is like any other tabbed dialog in modern Windows applications. It consists of a title bar and various tabs that show feature specific fields and buttons, which allow you to set and modify camera and system settings. Additionally, you view information and statistics regarding the cameras, network, and system.

Werks Setup Tabs

Setup is divided into five tabs— Camera, Recording, Email, Remote, and Advanced. To further introduce you to these tabs, here is a table that describes each one:

Tab Screens	Descriptions
Camera	View and edit camera properties such as brightness and contrast for the selected camera. Here you can perform these and other operations: • Changing camera names • Adjusting video quality attributes • Deleting cameras • Changing the camera display order
Recording	Manage camera motion detection, define fixed recording schedules, and control and monitor disk allocation and usage. • Set motion detection sensitivity • Create and modify motion detection zones • Schedule specific recording times • View disk usage
E-mail	Setup and edit email account information and define email and cell phone alerts for individual cameras.
Remote	Enable Remote Viewing and enter your My LukWerks user account information.
Advanced	Add a new camera to the system, display and edit advanced properties, passwords, and view system information. • Add a new camera to the system or get help finding undiscovered cameras • Change your system password • Update system software and firmware

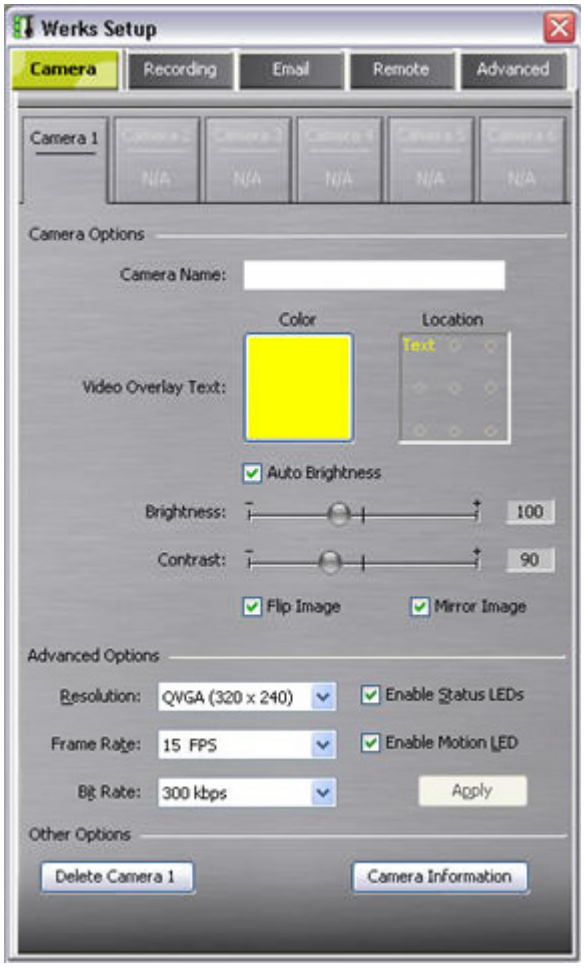
With the introductions out of the way, it is time to dive into each tab individually and become familiar with the features you can use.

Camera Options

Use the Setup Camera dialog to view and modify properties for each camera— e.g. define a name, flip the display orientation, and adjust the image quality. You will find the default image settings work for most conditions. However, adjusting these options when conditions require is easy and straightforward.

Launch the Camera Setup Dialog

From the main Werks screen click the SETUP button and choose the Camera tab to modify the camera settings:

Dialog	Item	Usage
	**Camera Buttons**	Click the camera buttons 1-6 to select the camera you wish to adjust.
	Camera Name	Set the name to display on the video screen and setup camera button.
	Text Color	Click to change the color of the text shown on the video image.
	Text Location	Click one of 9 positions within the box to set the screen location for the name.
	Auto Brightness	Check to allow camera to automatically adjust image brightness and contrast with changing conditions.
	Brightness +/-	Slide the bubble toward + to brighten and toward the – to darken the image.
	Contrast +/-	Slide the bubble toward the + or – to adjust image contrast.
	Flip Image	Check to flip image vertically when camera is mounted upside down.
	Mirror Image	Check to flip image horizontally like a mirror.
	Advanced Options	Set advanced options for the camera. (See the “Advanced Options” topic below for details.)
	Camera Information	View the Powerline adapter network settings and Powerline networking conditions for your cameras.
	Delete Camera	Click button to remove the selected camera from the list of active cameras in Werks. However, it does not delete any stored video.

ADVANCED OPTIONS

The advanced camera options allow you to change camera resolution, frame rate, and other options. We expect that you will rarely need to change these settings. Werks writes these advanced options to the Luk Camera for processing. Thus, when changing Advanced Options, remember to click the APPLY button.

The most common advanced option to adjust is Resolution, increasing it to 640 x 480. At the higher resolution you get a sharper image, but remember that to use this setting with live viewing, you will need a machine that matches or exceeds our Recommended Computer specifications. Using an underpowered PC with either higher resolution or higher bit rates may result in video that seems too jerky. With some power outlet locations (for the camera), the higher resolution and bitrate settings may not work fully so some experimentation is sometimes required.

Here is a brief review of these options:

Option	Description
Resolution	The Resolution dropdown option allows you to set VGA or QVGA resolution. By default, your cameras are set at QVGA (320 x 240) resolution and 15 frames per second (fps). You can experiment with your camera resolution and frame rate to produce the ideal results given the capabilities of your PC. Choosing higher a resolution requires a faster CPU and Video Card to smoothly render live and stored video to the screen.
Frame rate	The Frame Rate option allows you to choose video capture speeds between 15 fps (frames per second) and 5 fps. Choosing a higher frame rate requires a faster CPU and Video Card to smoothly render live and stored video to the screen.
Bit rate	The Bit Rate option allows you to specify the speed at which the picture is transferred. Higher bitrate means bigger file size and generally better video quality while lower bitrate means lower file size but worse video quality.
Camera order	Change the order in which this camera displays in the Setup program and on the live video feed.
Enable Motion LED	Check this box to enable the front red LED on the camera. When activated, the red LED will blink when the camera senses motion.

Delete a Camera

Setup > Camera > Camera # > DELETE CAMERA button.

When you unplug a camera from your system, Werks retains the settings of the camera (password, name, position, etc.), allowing you to move your camera to other needed locations around your home or office. In all, Werks anticipates that you will return the camera to the system. If you are permanently removing a camera from the system, you can free the camera position by deleting the camera using the Delete Camera command.

Here are the steps:

1) Open the Setup program.

Click on the Camera tab.

Click on the camera button for the camera you want to delete.

Click on the DELETE CAMERA button and click the YES button to confirm delete choice.

Note: Deleting a camera will remove all of your local camera configuration options, but it does not delete the stored video.

Recording Options

The Setup > Recording tab allows you to manage the recording of live video from your cameras to your PC hard drive. It allows you to manage motion detection, schedule recording times, and manage disk usage.

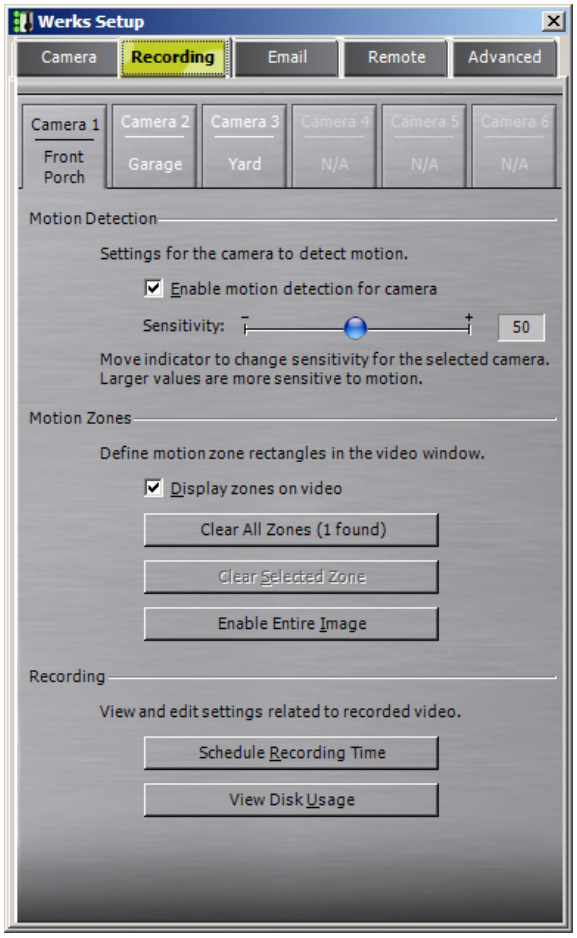
Learn About Motion Detection

By default, each camera automatically records video anytime it detects any motion. Recording only motion has the advantage of saving disk space. Luk Cameras also allow you to change from “entire image” motion detection, to individually defined zones. These smart cameras have the capability of detecting motion in up to 16 regions – which we call motion zones. This is useful if you want to eliminate detection along the road and limit it to the parking lot only. Motion detection works by comparing the difference between consecutive frames of video and calculating if any scene changes have been detected.

Each time the camera detects motion it alerts the Werks software and records the event and a few prior frames. Once motion is detected, the system records uninterrupted until 5-seconds after the motions stops. This could be seconds or minutes of compressed video.

Review the Recording Dialog

From the main Werks screen click the SETUP button and choose the Recording tab to modify your recording and disk usage settings:

Dialog	Item	Usage
	**Camera Buttons**	Click the camera button 1-6 to select the camera you wish to adjust.
	Enable Motion Detection	Check (default) to enable motion detection. Uncheck to only record on scheduled times and dates.
	Detection Sensitivity	Slide the bubble toward the [–] to reduce or toward the [+] to increase the motion sensitivity for the selected camera.
	Display of Zones	Check to see zones on the live view of each camera during motion detection.
	Clear All Zones	Click button to delete all motion detection zones for the selected camera.
	Clear Selected Zone	After clicking within one of the detection zone, click this button to delete the chosen zone. You can also simply press the Delete key.
	Enable Entire Image	Click to set the entire image as one complete zone. (Default)
	Schedule Recording Time	Click button to schedule recording times or times cameras are to be disabled.
	View Disk Usage	Click button to review current disk usage or to change the video storage location.

Enable & Disable Motion Detection

SETUP > Recording > Enable Motion Detection for camera

The default settings enable motion detection in all cameras you setup. To validate this, open the Setup > Recording tab and inspect the “Enable Motion Detection for All Cameras” option. You will see a checkmark in the checkbox. To disable motion detection, simply click in the checkbox so that the checkmark disappears. Remember that you have disabled it for only the camera selected in the Setup screen.

When motion detection is turned off, your cameras will record only during scheduled recording times.

Manage Motion Detection Zones

SETUP > Recording > Enable Motion Detection for camera

When you have the Setup > Recording dialog open, Werks enters a special mode that allows you to select and draw motion zones directly on the Live Video image. You must be in Live Mode to access the full functionality when working with motion zones.

To manage detection zones for a camera, follow these instructions:

1) Click on the SETUP button and choose the Recording tab.

   In the Motion Detection section, check the "Enable Motion Detection for camera" box.

   Creating and deleting individual zones now is an interaction between the open setup dialog and the live video window.

   a) To create a new zone, hold down your left-mouse button on one corner of the region and drag the mouse across the screen to the opposite corner of the zone. (If you decide that you do not like the zone you are creating, you can hit the ESC key before you let go of the mouse.)

   b) To delete a single zone, left-click anywhere in the zone and then press the Delete key or click the CLEAR SELECTED ZONE button.

   c) To delete all zones, click the CLEAR ALL ZONES button.

   d) Finally, to detect motion anywhere on the image, click the ENABLE ENTIRE IMAGE button.

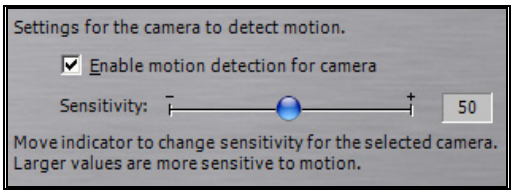
Remember, you can create up to 16 motion zones per camera.

Set Motion Detection Sensitivity

Setup > Recording > Motion Detection section > Sensitivity Slider.

Use the Sensitivity slider on the Setup > Recording tab to adjust the level of motion sensitivity for each camera. The setting ranges from 0 to 100 sensitive, or low to high sensitivity. 100 is the most sensitivity. You can adjust the sensitivity to meet your needs. A very low number will tell the camera to only detect motion by large objects (a person or car). A high number will increase the sensitivity allowing you to capture small objects like pets or even a passing cloud.

In our graphic below, the motion detection sensitivity level is set to 50.


Settings for the camera to detect motion.
Enable motion detection for camera
Sensitivity:
50
Move indicator to change sensitivity for the selected camera.
Larger values are more sensitive to motion.

Manage Recording Schedules

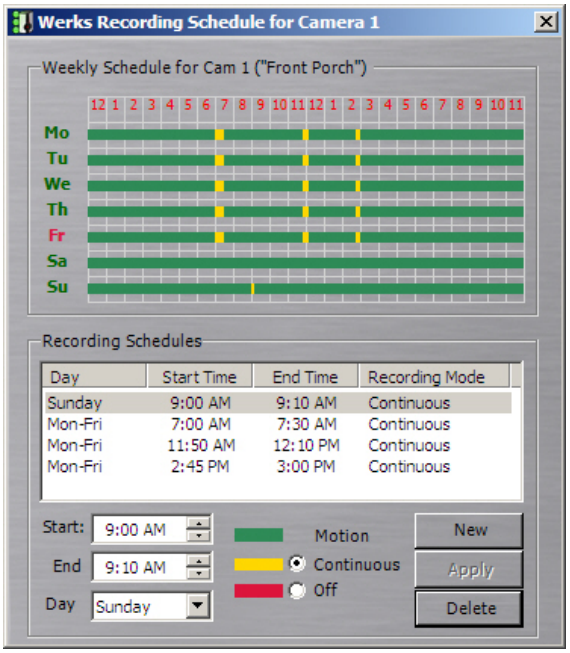
Setup > Recording > Recording section > SCHEDULE RECORDING TIME.

Werks allows you to schedule recording events for each camera. These events have two types: Continuous Recording and camera Off. During Continuous recording schedules, Werks records video from the selected camera even when there is no motion. Off schedules disable both Motion and Continuous recording, although you can still monitor the live video.

During times that are not scheduled, Werks by default will record Motion unless you have disabled motion recording (See *Enable & Disable Motion Detection Functionality* for more details.)

To activate the Recording Schedule dialog, click the SCHEDULE RECORDING TIME button on the Setup > Recording tab.

Here is a quick overview of the Recording Schedule dialog:

Dialog	Item	Usage
	**Weekly Schedule for Cam #**	This graph displays the scheduled recordings for the selected camera for a week. A line exists for each day of the week (Mo - Su). A column exists for each hour of the day. Colored markers of green for motion, yellow for continuous, and red for off indicate the currently defined schedules.
	Recording Schedules	Here you see a list of the recording schedules. Each line shows the details about the scheduled recording— the day(s), start and end times, and the recording mode. Select a line to edit or delete an existing schedule. In this example, you can see four schedules. The first is for Sunday only while the others are for Monday through Friday.
	Scheduling Area	The New, Apply, and Delete buttons allow you to add, modify, and delete recording schedules. You use the Start, End, Day, and type option to specify the recording details. Remember that each camera can have its own schedule.

Create a New Recording Schedule

Setup > Recording > SCHEDULE RECORDING TIME button.

Create a new recording schedule to turn on continuous recording (for a specified time period) or to turn off all recording. You create a new recording scheduled video recording using the Recording Schedule screen. To accomplish this task, follow these instructions:

1) Open the Setup > Recording dialog.

Click the button for the camera you wish to program.

Click the SCHEDULE RECORDING TIME button.

Click the NEW button to indicate you are creating a new entry.

Set your Start and End time, Days option, and choose between Continuous and Off.

Continuous Mode	Off Mode
Continuously record on the set days and times, even if there is no motion on the camera.	Disable recording on the set days and times, even if there is motion on the camera.

Click the APPLY button to save the schedule. You will notice the scheduled recording is added to the schedule list.

Note: It will take a few minutes for the new schedule to take effect.

Change or Delete a Recording Schedule

Setup > Recording > SCHEDULE RECORDING TIME.

Over time, you will need to modify or delete recording schedules. Changing a schedule is very similar to creating a new schedule:

1) From Setup, click on the Recording tab.

Click on the Camera # button for the camera you wish to change.

Click the SCHEDULE RECORDING TIME button.

Click on the recording schedule you wish to change in the Recording Schedules list

To modify the selected schedule, change the Start, End, Day, or Mode and click APPLY.

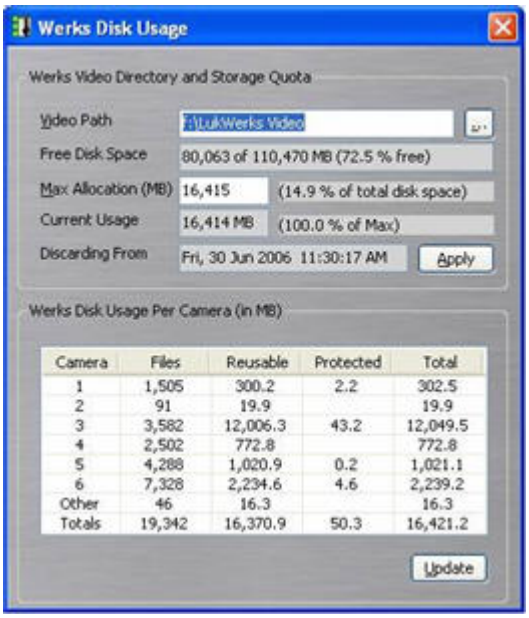
To delete the selected schedule, click DELETE.

Note: It will take a few minutes for the new schedule to take effect.

Manage Disk Usage

The Werks Disk Usage dialog allows you to view and change the disk allocation rules. The adjustable options include the Video Path and Max Allocation. You can also view the free disk space, current usage, and discard date among other statistics. You open the Werks Disk Usage dialog by clicking on the VIEW DISK USAGE button on the Setup > Recording dialog.

This graphic shows a screen shot of the Disk Usage dialog. A description of each field is also included:

Dialog	Item	Usage
	**Video Path (adjustable)**	The path where Werks stores video files. The default value is C:\LukWerks Video
	Browse Button (...)	The browse button allows you to navigate and pick another video storage directory.
	Free Disk Space	The amount of free space on the drive Werks is using to store video files.
	Max Allocation	The max amount of space you allow to Werks for storing video files. The number is in megabytes. The gray calculations shows the percent of the disk drive allocated for video storage use.
	Current Usage	Current usage shows the megabytes in current use for video files. The gray calculation shows the percent of the maximum allocated in use.
	Discarding From	Discarding From shows the date of the oldest file and the one Werks will delete if it needs to recycle space to make room for a new clip.
	Werks Disk Usage Per Camera	Here you can review a detailed list of the storage and files in use by each camera.

Change Video Storage Options

Setup > Recording > Recording section > VIEW DISK USAGE button.

Werks allows you to store captured video segments in any directory you wish. Once you have chosen a directory, Werks allows you to specify the maximum space you want to allocate for video. By default, when you choose a path, Werks will guess at a reasonable maximum disk allocation, which you can change.

To change the storage directory,

1) From the Setup dialog, click on the Recording tab.

Click the VIEW DISK USAGE button.

Either enter the path for the video files or click the browse (...) button and navigate to the path.

Finally, set the amount of disk space you wish to allocate to video files in this directory.

Note: If you reduce the amount of disk space allocated to video files to a number less than that currently in use, Werks will slowly reduce the space used as new recordings are created.

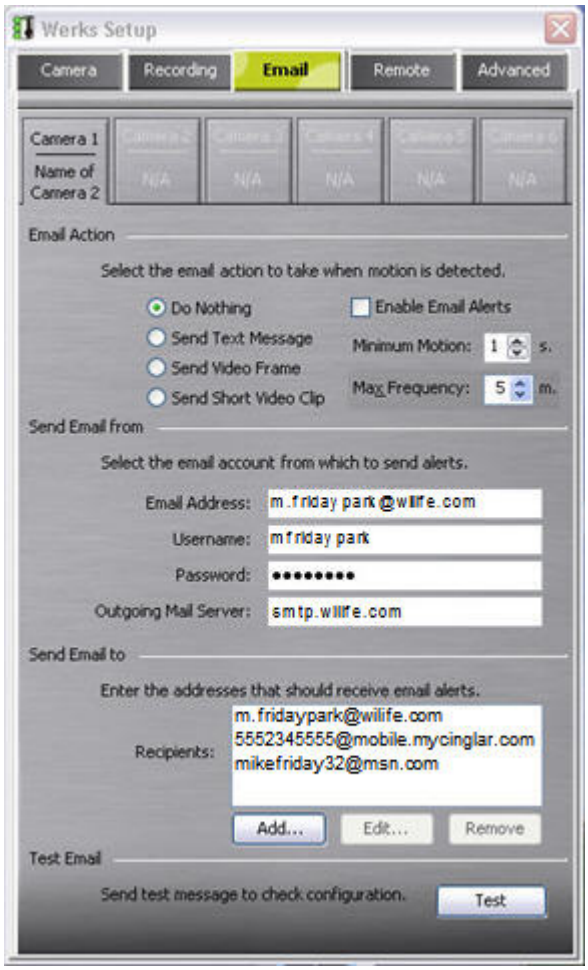
Click the APPLY button to apply the changes.

Email Alert Management

With Werks you can receive email and cell phone alerts (messages) when a camera detects motion. You have the option of receiving one of three message types: simple text-only, text and one frame of video, or a video clip. In any case, this email alert option allows you to know when your cameras are capturing motion.

You set email alerts on the Werks Setup > Email dialog, which allows you to activate and configure email alerts.

The following graphic is a screen shot of the Email dialog, after setting some of the options:

Dialog	Item	Usage
	**Camera Buttons**	Click the camera button 1-6 to select the camera for which you are managing alerts.
	Email Action Section	Select the type of alert action you want a camera to send when it detects motion. The options include—do nothing; send a text message; or send a frame of the captured video.
	Enable Email Alerts	Check to turn on email alerts for the selected camera. Uncheck to turn the alerts off.
	Minimum Motion	Set the minimum length of motion necessary to trigger an alert. This can be used to help eliminate trivial motion events from causing emails to be sent.
	Send Email from	Enter your account information for the email server that you plan to use for sending alert notifications. Information required to enable this option is your email address, account username, account password, and email server name. You obtain this information from your email service provider.
	Send Email To	Here you enter the one or many email and cell phone addresses to which you want to send alerts. Use the Add and Remove buttons to add and remove email address from the list.
	Test Button	Click the test button to verify that you have properly configured your email server. The test will send a message to all of the addresses you list in your To box.

Configure Email Server Settings

After you have entered the values specifying your local email account information (mail server name, account name, account password, email address) and added the email addresses in the Send Email to list, press the TEST button to send a test message to each of the addresses.

When you click the TEST button, Werks shows 'Sending' on the button's face.

If Werks successfully connects to your server, it displays a message asking you to check your email to see if a test message arrived successfully. If Werks was unable to send the test message, it will provide you with an error message indicating the type of problem.

> Sometimes, the process of sending and delivering the test message can take a few minutes, depending on your email provider.

Add Email Addresses

Setup > Email > "Send Email to" section.

The Werks application makes adding email address easy. If you want a specific email to receive alerts notifications on motion detection, follow these simple instructions:

1) Open the Setup and click the Email tab.

Enter the email address in the Email Address field.

Click the ADD button. The address is added to the list of email addresses.

Create Cell Phone Alerts

Most modern cell phones and cell phone providers support messaging. You can send alerts to your cell phone just like email messages. The trick is determining the email address for your phone. The typical format for these email addresses is ##########@yourprovidersaddress.com, where ########## is your cell phone number. Here are a few examples for different cell phone providers.

Provider	Email Address
Cingular	##########@mobile.mycingular.com
Sprint	##########@messaging.sprintpcs.com
T-Mobile	##########@tmomail.net
Nextel	##########@page.nextel.com
Verizon	##########@vtext.com
AT&T	##########@mmode.com

For example, if my cell phone number is (123) 555-7890 and my cell phone provider is Sprint, my alert email address is 1235557890@messaging.sprintpcs.com.

Because of limits in many cell phone messaging systems, most will not send you video frames or video clips.

Remove Email Addresses

Setup > Email > "Send Email to" section.

To remove an email address from the list of email addresses, follow these tasks:

1) Open Setup and click the Email tab.

In the "Send Email to" section, click on the email address you want to remove, so that it is highlighted.

Click the REMOVE button. The email address is immediately removed.

Remote Viewing Setup

Remote viewing is yet another great feature in LukWerks. As mentioned previously, it allows you to view live video from your cameras anywhere anytime. If you did not set up Remote Viewing during the Setup Wizard, first

create a "My LukWerks" account at www.wilife.com/register. Learn more by reading the chapter Using Remote Viewing later in this user guide.

Verify System Requirements

Before beginning the setup, confirm that your system meets our recommended requirements. Unlike a minimal LukWerks setup, remote viewing consumes more resources and requires a high-speed internet connection to perform well.

MACHINE CONFIGURATION

For remote viewing, confirm that your machine matches or exceeds the *recommended* configuration.

Requirement		Number of Cameras					
		1	2	3	4	5	6
CPU Speed	Minimum Recommended	1.0 GHz 1.4 GHz	1.2 GHz 1.6 GHz	1.4 GHz 2.0 GHz	1.6 GHz 2.4 GHz	1.8 GHz 2.6 GHz	2.0 GHz 3.0 GHz
Memory (MB)	Minimum Recommended	256 384	384 512	512 512	512 768	512 768	512 1024
Video Card (MB) DirectX 9 compatible Latest video driver	Minimum Recommended	32 32	32 32	32 64	64 128	64 128	128 256
Display Resolution:		1024 x 768 or higher, 32 bit color					
Hard Drive (MB):		100 MB for program and a minimum of 500+ MB for video recording					
Operating System:		Microsoft® Windows® 2000; Microsoft® Windows® XP Home Edition, XP Professional, or XP Media Center Edition					
USB:		One free USB 1.1 or 2.0 port (2.0 recommended)					
Media Player:		Microsoft Windows Media® Player 9 or later					
Other:		CD ROM drive for installation					

NETWORK REQUIREMENTS

Requirement	Description
Network Speed	Uplink and downlink speeds of 150kpbs or faster, per installation (DSL, Cable Modem, T1)
Connection Type	Always-on broadband connection

Remote Viewing Using Cell Phones & Handhelds

LukWerks provides remote viewing using Windows Mobile cell phones, handhelds, and web browsers. The common requirement for a compatible web browser is support for Windows Media Player 9. The common requirement for the cell phone is also support for Windows Media 9. Usually you can find these phones labeled as Windows Mobile or Windows Smartphones.

LukWerks is compatible with a wide range of Microsoft Windows Mobile cell phones and wireless handhelds. Of course, these devices require Internet access either through a cell service provider or wireless Internet hub, depending on your device.

Examples of Compatible Cell Phones:

Anextek SP230	Palm Treo 700w
Audiovox PPC 6601; SMT 5600; PPC 4100;	Motorola Q; CN620; Motorola MPx, MPx100 & MPx220;
HP iPAQ hw6500 series	Samsung SCH-i730
iMate SP5; SP5m; K-JAM; JASJAR	Siemens SX66

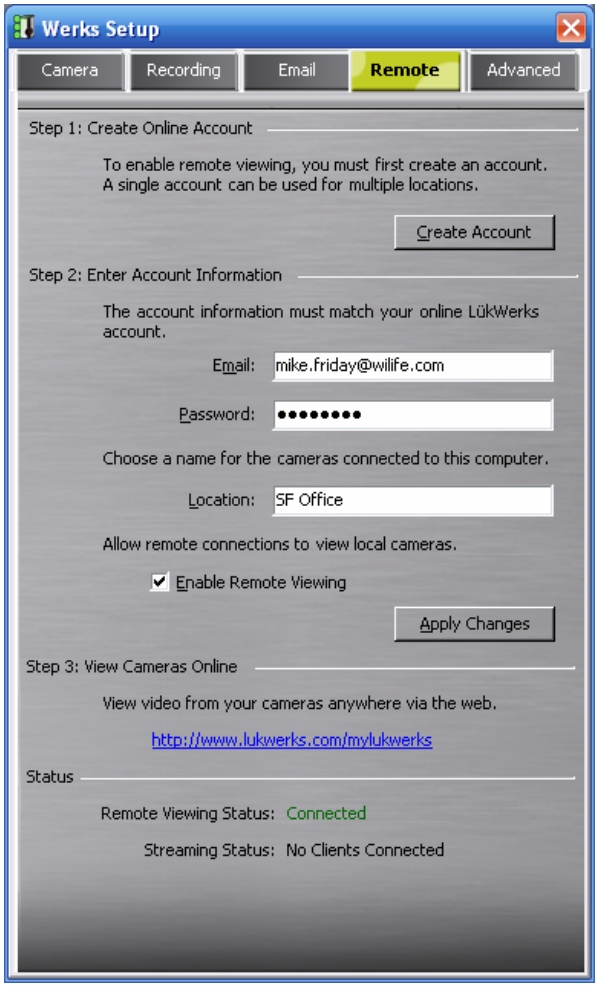
Example Wireless Handheld Devices:

Asus MyPal A730W	HP iPAQ hx2400 series; hx2700 series; hx3700 series; hx4700 series
Dell Axim X51v; X50v; X30v	Toshiba e805

BROWSER

Common Requirements	Windows Media Player 9 or later
Browsers	Microsoft Internet Explorer Version 5.5 or later

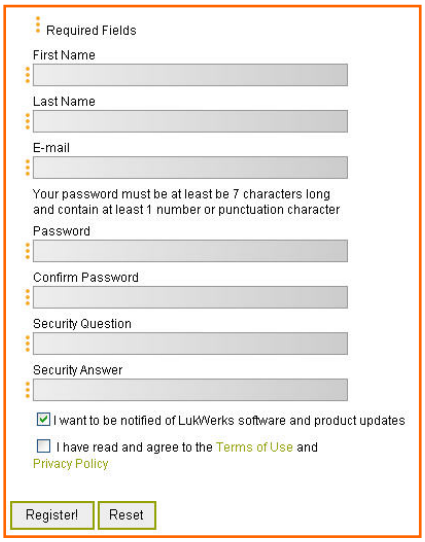
Once you have created your My LukWerks account, you are ready to setup individual sites such as the Home, Office, or Vacation Home. You use the Setup > Remote dialog to configure the site options:

Dialog	Item	Usage
	**Create Account**	If you did not create a My LukWerks account during the Setup Wizard, click this button to quickly jump to the www.wilife.com/register site where you create your My LukWerks account.
	Email	Enter your My LukWerks account name, which is also the email address you use when creating your My LukWerks account.
	Password	Your secret password used to access your account and remote viewing.
	Location	Set the name for this location. You can have many sites attached to your remote viewing account.
	Enable Remote Viewing	This checkbox, when checked, activates remote viewing functionality, allowing you to have remote access to your camera images from the Internet and Smart Phone.
	Apply Changes	Click this button to write the new account information to the options file.
	View Cameras Online	Click this link to start your Internet explorer in the My LukWerks page. From here you can login and check remote access of your cameras.
	Status	In the status fields, Werks reports current Remote Viewing information. Remote Viewing Status read Connected when Werks makes a successful like with the My LukWerks servers. Streaming Status tells you when someone is remotely viewing the local cameras.

Set Up Remote Viewing

Note: Skip this step if you set up Remote Viewing during the Setup Wizard!

Setting up Remote Viewing is a two-step process. First, you create your My LukWerks account and then enable Remote Viewing in Werks Software. These instructions assist you in completing both of these steps within the Werks Software:


Required Fields
First Name
Last Name
E-mail
Your password must be at least be 7 characters long and contain at least 1 number or punctuation character
Password
Confirm Password
Security Question
Security Answer
I want to be notified of LukWerks software and product updates
I have read and agree to the Terms of Use and Privacy Policy
Register!
Reset

Create Your My LukWerks Account

Note: To create your online account, you will need Internet access.

1. In Werks, click on the Setup button on the main screen.

   The Werks Setup dialog opens.

2. Click on the CREATE ACCOUNT button, which will open the Internet browser and display the Registration form.

   As you can see by the example of the form on the right, you are required to enter data regarding your name, e-mail address, and then asked to create a password.

   Here are a few notes on some of these fields:

Field Name	Description
Email	Your email address doubles as your account name.
Password	We recommend you create a password using at least 7 characters, one of them being a number. Punctuation characters are allowed.
Confirm Password	Re-enter the password that you entered in the Password field.
Security Question	Create a security question that you can use to unlock your account should you ever forget your password. For example: “my first dog’s name.”
Security Answer	Enter the answer to your security question. For example: “Rocky.”
I want to be notified of LukWerks software and product updates	Leave this checkbox marked to receive email about software or camera updates. Remove the checkbox if you don’t wish to receive any notifications.
I have read and agree to the Terms of Use and Privacy Policy	Click this checkbox after you have read the Terms of Use page and Privacy Page. This checkbox must be marked to complete your registration.

3. When you have completed the form, click the REGISTER! button.

2. Enable Werks for Remote Viewing

Enable Werks by following these steps:

1. Return to the Setup > Remote tab screen in Werks.
2. In “Step 2: Enter Account Information,” enter the same Email address and password that you used to create your My LukWerks account.
3. Enter a Location name for your site; for example, Home, Office, or Grandma’s, etc.

4. Check the Enable Remote Viewing checkbox.
5. Click the APPLY CHANGES button.

   In the Status section, notice that the Remote Viewing Status will display **Connected** when it completes the link to the online servers. If the connection becomes broken, the Remote Viewing Status line will display a message, such as Disconnected—Account Unknown, Inactive - No client, Active - Direct mode, or Active - Relay mode. In the case of disconnected error, please recheck your account info and review the troubleshooting guide for possible reasons and solutions.

Here are some frequent questions that may be of help:	
Will I have to pay to use remote viewing?	No. The standard remote viewing functionality is a free service.
Is there a time limit for viewing video?	It depends on your Internet capability and firewall settings. LukWerks automatically determines how to stream video to you in the most direct way. If Werks cannot find a direct path, we direct the video feed through WiLife's network. We call this "Relayed Mode" and there is a three-minute time limit. If Werks finds a direct path, you are connected via "Direct Mode." In Direct Mode, there is no time limit. You can view a video feed for any length of time. Cell phone viewing is limited to 3 minutes.

There are answers to more questions available in our Knowledge Base (Frequently Asked Questions) and Tips & Tricks page at Wilife.com:

Knowledge Base/FAQ (http://wilife.custhelp.com/cgi-bin/wilife.cfg/php/enduser/std_alp.php)

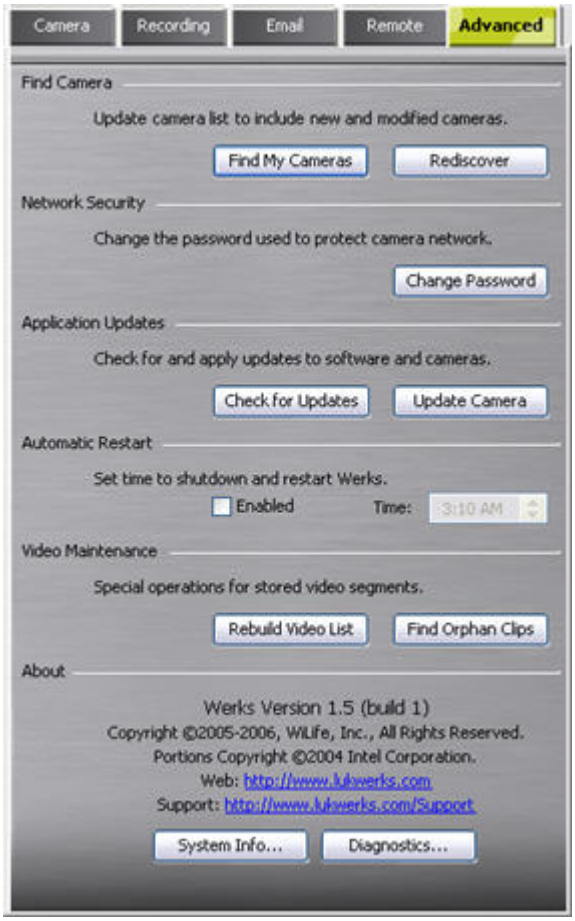
Tips & Tricks (http://www.wilife.com/Support/TipsAndTricks.aspx)

Advanced Options

The Advanced dialog includes tools that assist you in maintaining the cameras and the application. These tools range from changing passwords to checking for software and firmware updates. Tools would be a more fitting title for the dialog.

Review the Advanced Options Dialog

Here we take a quick peak at the Advance dialog:

Dialog	Item	Usage
	**Find My Cameras**	This feature allows the application to find any newly added cameras, even if you have set a password for your current system.
	Rediscover	Rediscover initiates a search for cameras that you may have lost due to computer or other problems.
	Change Password	Change password allows program a password into your cameras and USB receiver allowing them to encrypt your video.
	Check for Updates	Search our online update service for new releases of software or camera firmware.
	Update Camera	Update cameras with the most recent firmware version.
	Automatic Restart	This option allows you to enable and set a time that Werks automatically restarts. This may be helpful if you are running on a machine with limited memory.
	Rebuild Video List	Rebuild Video List compares the Werks Video database with the available video files to ensure every file is recorded in the database. You may want to perform this operation if you suspect the video database is corrupt.
	Find Orphan Clips	This option looks under the currently selected video path (e.g. the default C:\LukWerks Video) for any video files that are not currently associated with a camera.
	About	Here you can inspect the current version number for your Werks installation and review system information and diagnostics. This is helpful when contacting support.

Find My Cameras

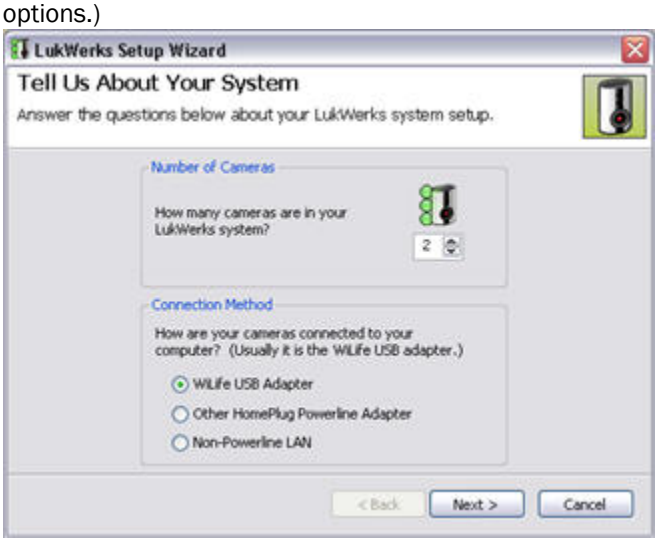
SETUP > Advanced tab > FIND MY CAMERAS

- The Find My Cameras Wizard automatically attempts to find all of the cameras on your network, including any new cameras you may have just plugged in. What makes the Wizard wonderful is the fact that it also helps walk you through situations in which Werks cannot find a camera.

Follow these instructions to include the new camera into your Werks system:

1) Go to the Werks > Setup > Advanced dialog screen.
2) Click the FIND MY CAMERAS button. The Wizard displays.

3) Enter the number of cameras you expect the Wizard to find. For these instructions, we want Werks to find 2 cameras. In the Connection Method section, tell Werks how your computer is connected to your cameras. (This is usually through the WiLife USB Adapter. However, if it is connected through a different HomePlug powerline interface, or a standard network LAN in your home, select those options.)


LukWerks Setup Wizard
Tell Us About Your System
Answer the questions below about your LukWerks system setup.
Number of Cameras
How many cameras are in your LukWerks system?
2
Connection Method
How are your cameras connected to your computer? (Usually it is the WiLife USB adapter.)
WiLife USB Adapter
Other HomePlug Powerline Adapter
Non-Powerline LAN
< Back
Next >
Cancel

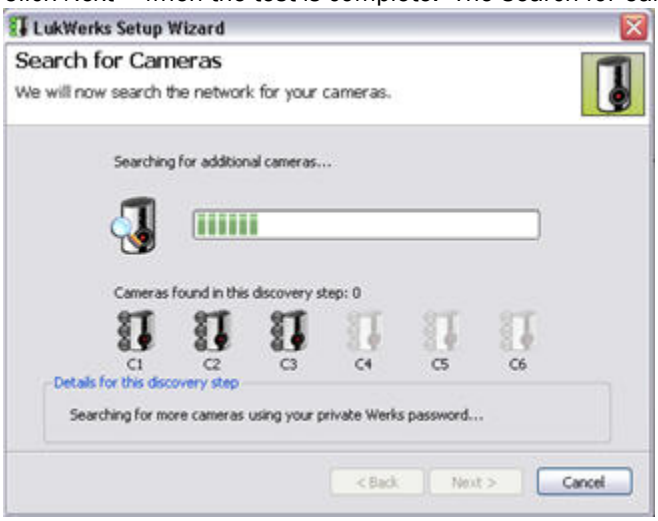
4) Click Next>. The Plug In Your Cameras screen displays.

LukWerks Setup Wizard
Plug in Your Cameras
Position cameras for video surveillance.
Connect your cameras to their power supplies and plug them into a nearby outlet.
Do not plug cameras into a surge protector - they have one built in.
Use one of the many convenient mounting options.
< Back
Next >
Cancel

5) Click Next>. The Wizard tests the configuration of your computer such as the powerline adapter, operational firewalls, and other network adapters. The following graphic is an example of the main Wizard screen, in which all tests are run from.

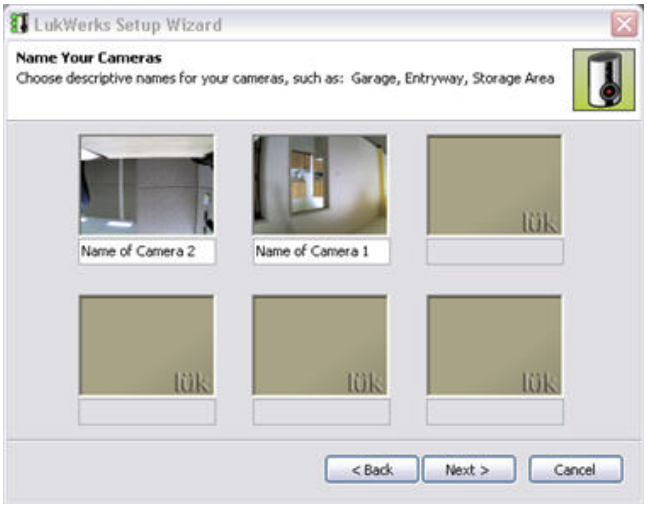
LukWerks Setup Wizard
Configure and Test Computer Setup
LukWerks will now configure and test your system to get you going fast.
The first time you run Werks, we configure and test the following items:
Configure and Test Powerline Adapter
Configure Windows Firewall
Check Other Firewalls
Check Conflicting Network Adapters
Details
Your computer and network setup tests have all completed successfully.
Click Next to continue setup.
< Back
Next >
Cancel

6) Click Next > when the test is complete. The Search for Cameras screen displays.



Cameras that have been discovered will display with active LED marks. Un-discovered cameras will display with gray LEDs.

7) When Werks has successfully found the number of cameras you told it to look for, it will display the "Name My Cameras" screen. On this screen, you can enter or edit the name of each camera. Click Next> when you have finished naming your cameras.


LukWerks Setup Wizard
Name Your Cameras
Choose descriptive names for your cameras, such as: Garage, Entryway, Storage Area
Name of Camera 2
Name of Camera 1
< Back
Next >
Cancel

When you have completed the wizard, the last screen of the Wizard displays. Click Finish to close.

LukWerks Setup Wizard
Find My Cameras
Here are your results:
System Configuration:
• Complete, all tests passed
Werks Cameras:
• Found 1 of your 2 cameras, try again later.
Rerun the camera setup wizard at any time by clicking the "Find My Cameras" button on the Setup...Advanced dialog in Werks.
lük werks
wilife
< Back
Finish
Cancel

Rediscover Cameras

Setup > Advanced > Find Camera section > REDISCOVER button.

On rare occasions, you may lose a camera due to powerline problems, bad weather, or even static electricity. Rediscover restarts the camera search process to locate cameras on the network that have a password matching your password (if you have set a password). This may be a convenient way to "delete" multiple cameras from your system, since all cameras are deleted, and then those which are detected are again added to your system.

> Note: When cameras are rediscovered, they may have different camera numbers than you have previously assigned. Remember, you can easily change these camera numbers by simply dragging the camera images to the desired window position in Live mode.

To start this procedure, follow these simple tasks:

1) Click on the SETUP button. The Werks Setup Program displays.
2) Click on the Advanced tab.
3) In the Find Camera section, click on the REDISCOVER button. A popup message displays.
4) Click YES if you wish the system to rediscover the cameras. Click NO to exit out of the procedure without rediscovering the cameras.

Set or Change Your Password

Setup > Advanced > Network Security section > CHANGE PASSWORD button.

Werks uses passwords to secure communications links between cameras, the USB receiver, and Werks. When the system has a password, unauthorized access to your cameras and video is prevented. Change Password allows you to enter a new security password or even remove the password.

To change the password, follow these steps:

1) Go to the Setup > Advanced dialog.

   Locate the Network Security section and click on the CHANGE PASSWORD button.

Werks Password Entry
Werks uses the system password for two purposes.
1. To authorize certain operations within Werks
2. To secure video connections to your computer
IMPORTANT: Write this password down. It cannot be reset, recovered, or deleted if you lose it.
Current password:
New password:
Re-enter new password:
Change Password
Cancel

   Enter the current password, if you are changing and existing password. Otherwise, Werks will make this field read only.

   Type your new password in both the New and Re-enter fields to confirm the password.

   > Note: Write this password down it is a difficult process to clear a forgotten password. If you do forget you password, review the Troubleshooting topic “I have forgotten my local LukWerks password” for instructions.

   Click CHANGE PASSWORD to accept the new password.

Check for Software Updates

Setup > Advance > Application Updates section > CHECK FOR UPDATES button.

Werks will compare the software and firmware version dates recorded on your PC with the latest versions available online. If your PC shows an older date for either one or both of them, Werks will offer to download and install the latest version.

Update Camera Firmware

Setup > Advance > Application Updates section > UPDATE CAMERA button.

This feature updates the selected camera with the most recent firmware version currently downloaded to your PC's hard disk. Firmware versions are typically downloaded as part of an overall software update (see Check for Software Updates topic). Werks automatically keeps track of which camera firmware is appropriate for different camera types such as the Indoor and Outdoor Cameras.

To download new firmware updates:

1) Go to the Setup > Advanced tab screen and click the CHECK FOR UPDATES button.
2) After the system checks for new updates, it will notify you if an update for your cameras is available. You can choose to start the update from that notification message. Or, you can click on the UPDATE CAMERA button.
3) Check the checkboxes next to the cameras you wish to update.
4) Select the firmware file using the Browse button.
5) Click the UPDATE FIRMWARE button and wait for the process to complete.

You should note that each time Werks starts up, it automatically checks the firmware versions on your cameras and the available local firmware files. If it finds that new firmware is available, it will prompt you to update your cameras. As a result, you do not need to worry about manual checking for new camera updates.

Change the Automatic Restart Time

Setup > Advance > Automatic Restart section > Enabled & Time fields.

Some low-end machines run better if programs occasionally shutdown and restart. This feature allows you to set a time for the Werks application to automatically restart each day. By default this option is disabled as most computers do not need the daily process.

> Note: This function will not start Werks if it is not already running. Instead, if Werks is already running at the indicated time of day, it will stop Werks and then immediately restart it.

To edit the time, follow these steps:

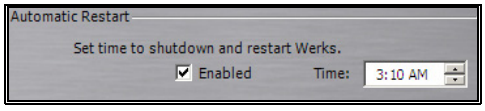
1) Go to the Setup > Advanced dialog.

   Locate the Automatic Restart section. You will see two options: Enabled and Time.

   By default, the Enabled checkbox is unchecked. Check the box if you want to enable auto restart.

   In the Time field, specify the time you want the Werks application to restart each day.

   The following graphic shows that the restart time has been set for 3:10AM.



Rebuild Video Segment List

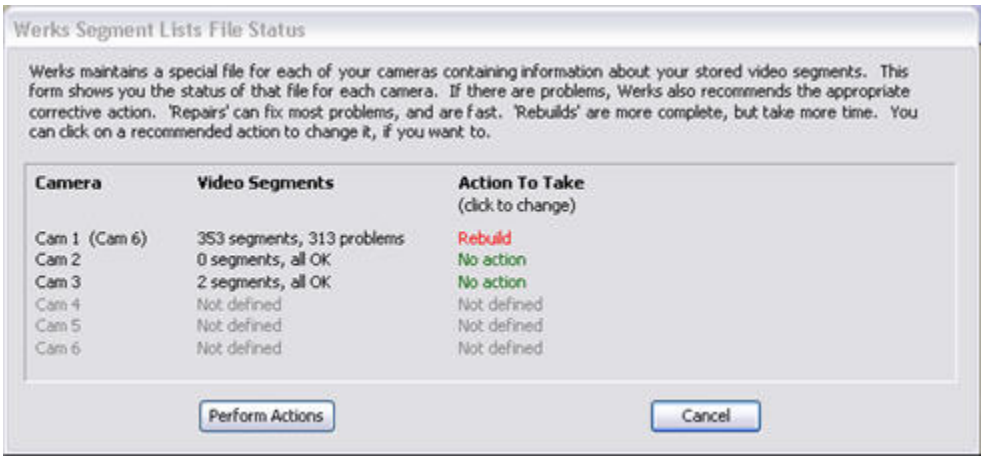
Setup > Advanced > Video Maintenance section > REBUILD VIDEO LIST button.

This operation rebuilds your video database by examining each file in your Werks Video Directory. You may want to perform this operation if you suspect your video database has become corrupt by some hard disk or computer failure. The obvious sign of a corrupt database is missing video segments in the Playback window. This process may take a long time to complete if you select to rebuild the list for all cameras.

To rebuild your video database follow these steps:

1) Go to the Setup > Advanced dialog.
2) In the Video Maintenance section, click on the REBUILD VIDEO LIST button.

Recording and Playback will halt during this operation. This procedure may take a long time.


Werks Segment Lists File Status
Werks maintains a special file for each of your cameras containing information about your stored video segments. This form shows you the status of that file for each camera. If there are problems, Werks also recommends the appropriate corrective action. 'Repairs' can fix most problems, and are fast. 'Rebuilds' are more complete, but take more time. You can click on a recommended action to change it, if you want to.
Camera
Video Segments
Action To Take
(click to change)
Cam 1 (Cam 6)
353 segments, 313 problems
Rebuild
Cam 2
0 segments, all OK
No action
Cam 3
2 segments, all OK
No action
Cam 4
Not defined
Not defined
Cam 5
Not defined
Not defined
Cam 6
Not defined
Not defined
Perform Actions
Cancel

3) Each camera will indicate the recommended action to be taken for the files associated with that camera. Most commonly, it simply indicates that No Action is required. If some problems have been discovered, Werks may suggest that you execute a Repair or Rebuild operation. Repairs are recommended if there are only a limited number of minor issues. Otherwise, a Rebuild will be suggested. Repairs are relatively fast, but Rebuild operations can take a long time, especially if you have many hundreds of thousands of files. You can change the action by right-clicking on the "Action to Take" setting for each camera. The actions available are:

4) Click Perform Actions to start the rebuild process.

Note: Recording and Playback will halt during this operation. This procedure may take a long time if all cameras are selected.

Find Orphan Clips

Setup > Advanced > Video Maintenance section > FIND ORPHAN CLIPS button.

This is a rarely needed and used tool. It searches the current video path (e.g. the default C:\LukWerks video) for any video files that are not currently associated with a camera. This is possible if you have recently removed or changed cameras. If a camera has been removed from your Werks system, the video files are still stored on your computer's hard disk. But they can't be viewed in Playback mode unless Werks has a camera object to associate with these orphan video files. This function allows you to create a camera object, even if the physical camera which captured those files is no longer in your Werks system.

To use this tool, follow these instructions:

1) Go to the Setup > Advanced dialog.

   Locate the Video Maintenance section and click the FIND ORPHAN CLIPS button.

If Werks finds any of these “orphaned” video files, it reports its findings to you, prompting you to allow Werks to create a camera to associate with these stored video files.

If Werks doesn’t find any orphaned video files (most common), a message displays informing you of this fact. Click OK to close out of the message.

5

Using Remote Viewing

Using the Werks Software, and your My LukWerks account, you can access live video from your cameras anywhere in the world using a Windows Media enabled Internet browser, wireless PDA, or cell phone.

When you enable Remote Viewing, your Werks PC becomes a video server ready to publish video through the secure LukWerks network over the Internet to you, wherever you are. LukWerks intelligently creates the most efficient path through your local routers to your remote device. You connect to your video feed by going to www.lukwerks.com and logging into your My LukWerks account – using a username and password you set. Once connected to your account, you select the site and cameras you want to view. The LukWerks server then routes a live video feed to your device.

During this process, LukWerks automatically determines your system's firewall settings and Internet capability in order to stream video to you in the most direct way possible. If Werks cannot find a direct path, we direct the video feed through WiLife's network to you. We call this mode "Relayed Mode." In this mode, there is a three-minute time limit. If Werks finds a direct path, you are connected via "Direct Mode." In Direct Mode, there is no time limit. You can view a video feed for any length of time.

The following illustration shows the remote viewing process.

WWW.
werks
2 The Werks PC Software turns your PC into a video server. When you log into your My LukWerks account, Werks sends the secure video to you.
3 Your My LukWerks account is accessible by using a compatible cell phone, handheld, or PC, anywhere you might be in the world, and at anytime, day or night.
4 Your My LukWerks account allows you to view live, secure video feeds for your cameras at one location at a time. You can choose to view just one camera, cycle through all cameras, or view all cameras at once.
1 Luk Cameras send live, secure video feed over the electrical wires in your home to your PC.
Location 1
Location 2
Location 3
Location 4

Remote Viewing has so many applications:

Home Security

Business Security

2nd Home Security

Family Monitor

Elder Care Monitor

Pet Monitor

Anywhere Anytime Access

- Live video from the road
- Connect over the Internet
- View from PC browser or Windows Mobile cell phone

Remote Viewing From a PC

Note: This process assumes that you have completed the setup steps for Remote Viewing, located in Chapter 3.

Remote viewing is a process that consists primarily of two easy steps – logging into your My LukWerks account and selecting which camera or cameras you want to view. This section shows you how to accomplish those tasks.

Our remote viewing feature, however, offers more options that help enhance your experience. We will discuss those in the following section as well. The layout of the section's topics are as follows:

a. Log in to My LukWerks

b. Use the My LukWerks Page

   i) View the video feed for one camera

   ii) View the video feed for all cameras at the selected location

   iii) View the video feed for your cameras using the cycle feature

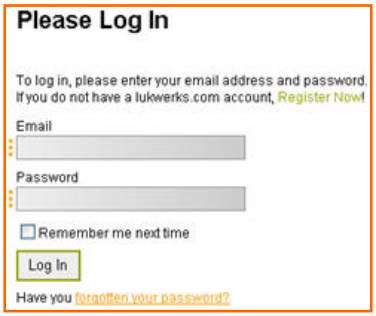
   iv) Using the viewing window

   v) Viewing video in compatibility or robust mode

Logging into My LukWerks

1) Go to www.lukwerks.com and click on the My LukWerks menu option. The Please Log In page displays.

2) Enter your email and password. Then click Log In. You will then be redirected to your My LukWerks page.


Please Log In
To log in, please enter your email address and password.
If you do not have a lukwerks.com account, Register Now!
Email
Password
Remember me next time
Log In
Have you forgotten your password?

Hint: If you mark the "Remember me next time" check box, the system will automatically open your My LukWerks page.

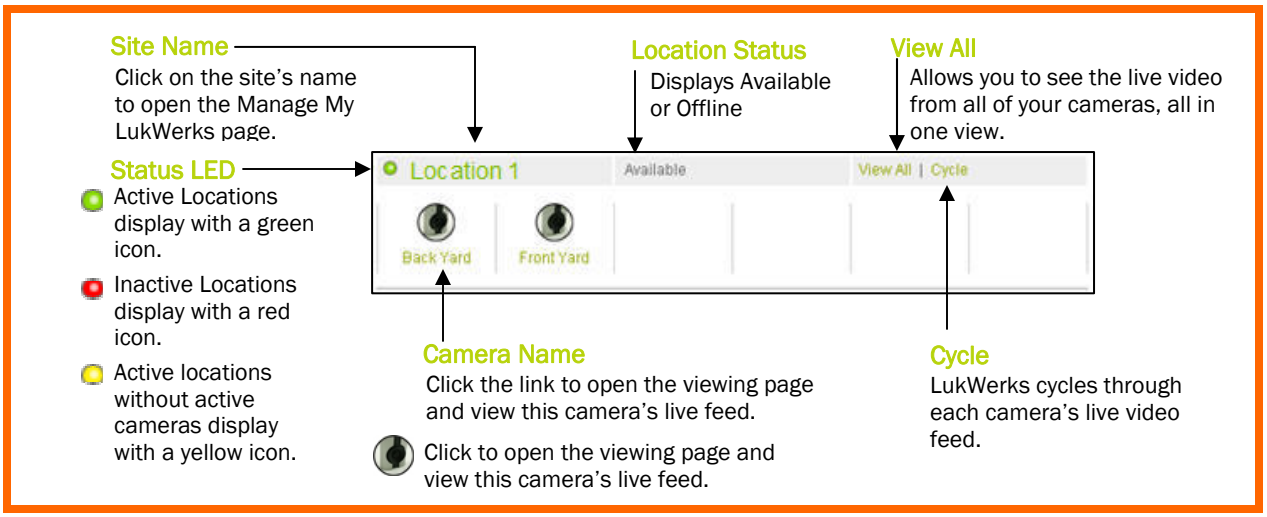
If you ever forget your password, you can come to the Log In page and click on the link "Have you forgotten your password?" Instructions regarding this task are found later in this chapter.

Using the My LukWerks Page

The My LukWerks page allows you to see all LukWerks sites and cameras on one page.

The layout of the page is designed so you can easily distinguish between sites and the cameras used for each site. In the example below, you can see the information and options available for each site.

Here are some hints to help you better understand the links on the page:


Site Name
Click on the site's name to open the Manage My LukWerks page.
Location Status
Displays Available or Offline
View All
Allows you to see the live video from all of your cameras, all in one view.
Status LED
Active Locations display with a green icon.
Inactive Locations display with a red icon.
Active locations without active cameras display with a yellow icon.
Location 1
Available
View All | Cycle
Back Yard
Front Yard
Camera Name
Click the link to open the viewing page and view this camera's live feed.
Click to open the viewing page and view this camera's live feed.
Cycle
LukWerks cycles through each camera's live video feed.

VIEW THE VIDEO FOR ONE CAMERA

To view live video for just one camera, you can do either one of these options:

a. Find the desired location and then click on the camera icon

b. Find the desired location and then click on the camera's name, which displays beneath the camera icon

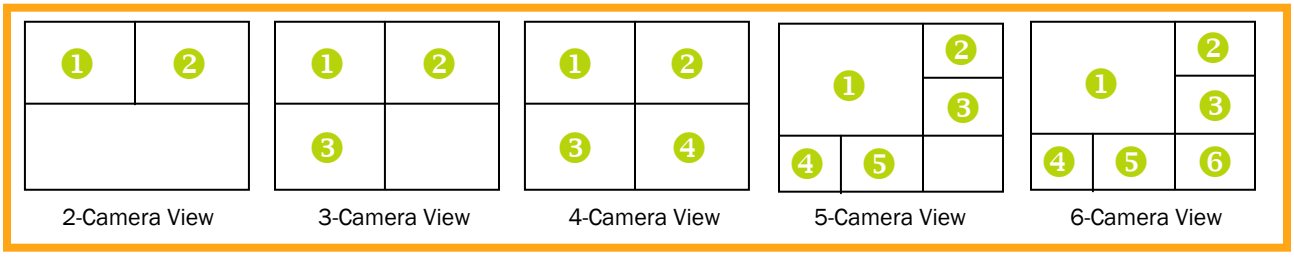
The viewing page opens and the video plays in the viewing panel, as shown in this example:

For information regarding this page, see the topic "Using the Viewing Window" later in this chapter.

VIEW THE VIDEO FOR ALL CAMERAS IN ONE IMAGE

To view live video for all cameras at a specific site, locate the site you want to view and then click the link titled "View All."

Upon clicking "View All," the viewing page displays. Because you are viewing the video feed from all of your cameras, the viewing panel will be divided up into squares, each square displaying the video feed for one of the cameras. The illustration below shows what the viewing panel displays if you have 2, 3, 4, 5, or 6 cameras:



VIEW THE VIDEO FOR YOUR CAMERAS USING THE CYCLE FEATURE

The "Cycle" option allows you to view the live, secure feed for all of the cameras at the selected location one at a time. The Vieiwng page will rotate through each camera and will continue to do so until you turn the option off.

USING THE VIDEO VIEWING WINDOW

The Video Viewing Window automatically opens when you click on a single camera icon or the link View All or Cycle.

As the following screenshot shows, the Video Viewing Window consists of a viewing panel, additional camera links, and a status bar.

Here are some additional notes about the features and options on the screen:

Components of the Viewing Window	
1	Name of the location of cameras.
2	List of cameras set up at this location. Click on a camera to view the live, secure video.
3	View All : Allows you to see the video from all of your cameras in one view. Cycle : Viewing panel rotates through each camera's video.
4	The video viewing panel displays the video.
5	The status bar shows the following information: • Status of the video-- connecting, buffering, or playing. • The amount of viewing time left in the current session. Only displays if you are using Relayed Mode. • The Normal and Large options allow you to alter the size of the video. The default setting is Normal.

Viewing Video in Direct vs. Relayed Mode

Direct Mode

If you are viewing video Direct Mode, you are in the best possible mode. However, the Internet may still block video for a number of reasons. If you do not see video after a few minutes, consider switching to Relayed Mode, which uses our WiLife network and requires less browser ability. To switch to this mode, you simply click on the button SWITCH TO RELAYED MODE. You can switch back to Direct Mode at any time.

There is no viewing time limit in this mode.

Relayed Mode

If you are viewing video in Relayed Mode, it is because your firewall or other Internet influences are preventing direct access to your video. Relayed Mode directs the video feed through WiLife's network to you. Because of this, there is a time limit of 3 minutes for each viewing session. Of course, you can re-connect and receive another 3 minutes viewing time, as many times as you want.

If you would like to use Direct Mode and not be restricted to a time limit, you can enable UPnP on your router. If you cannot enable UPnP, you can manually set ports in the router for Werks to use. The port addresses Werks uses are 20570 to 20575. (Contact the manufacturer of the router or see your firewall or router documentation for complete instructions about manually configuring ports.)

If you are using Relayed Mode, you do not have the option to switch to Direct Mode.

Mobile devices will always use Relayed mode.

Managing Your My LukWerks Account

Your My LukWerks Account allows you to update your user profile and change your password and/or login.

Within this section, you will find the instructions on how you can accomplish these tasks.

Changing User Profile Settings

To update your user profile, follow these instructions:

1) Go to www.lukwerks.com and click on the My LukWerks menu option.

   If you previously marked the "Remember me next time" check box, the system will automatically open your My LukWerks page. If not, you will need to enter your login name and password.

2) On the My LukWerks page, click on the My Account link in the navigation panel.

3) Click on the "Update Profile" link in the navigation panel or the "click here" link in the Update User Profile section.

4) Complete all of the fields showing on the form.

5) When you have completed the form, click the button UPDATE USER PROFILE.

Changing Your My LukWerks Password

The Change Password option can be used when you have accidentally forgotten your original password or if you feel the security of your password has been compromised. Besides, it is a good security practice to change your password on a regular basis.

Change your password by following these steps:

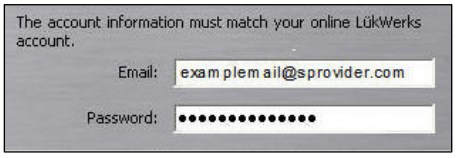
1. Go to www.lukwerks.com and click on the My LukWerks menu option.
2. Click on the link "Have you forgotten your password?"
3. Enter your email address and click SUBMIT. LukWerks will send an email to you with a temporary password.
4. Log back into My LukWerks using this temporary password.

   At this point, we suggest that you change the temporary password to one that is easier to remember.
5. Click on the My Account link.
6. Under the Manage Personal Settings heading, click the "Change Password" link. The Change Password page displays, as shown in this graphic.

7. In the Current Password field, enter the temporary password.

   Note: You may be changing your password for other reasons. If so, just enter your current password.
8. In the New Password field, enter a new password.

   Hint: We recommend that your password is at least 7 characters long and includes a number. Punctuation symbols are also allowed.
9. Re-enter the new password in the Confirm Password field.
10. Click CHANGE PASSWORD.
11. Now that you have changed your My LukWerks password, you must change the password in the Werks Software > Setup > Remote tab screen.



   If you do not change the password on the Remote tab screen in Werks, then the Remote Viewing process will not recognize your account. Errors you may encounter include the following:

   - "Unknown Remote Viewing Account." This message displays on the Live screen, in the message panel.
   - "Disconnected–Account Unknown." This message displays on the Remote tab screen, in the Status section.

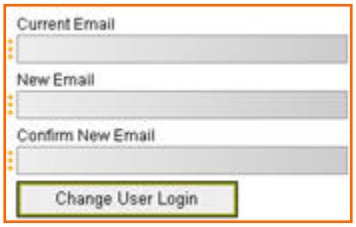
CHANGING YOUR MY LUKWERKS LOGIN NAME

Note: When you change your login name, your account will be disabled until you complete the process, as described below.

To update your user profile, follow these instructions:

1. Go to www.lukwerks.com and click on the My LukWerks menu option.

   If you previously marked the "Remember me next time" check box, the system will automatically open your My LukWerks page. If not, you will need to enter your login name and password.
2. On the My LukWerks page, click the My Account link in the navigation panel.
3. Click the "Change Login" link in the navigation panel or the "change user login" link in the Change Login section.

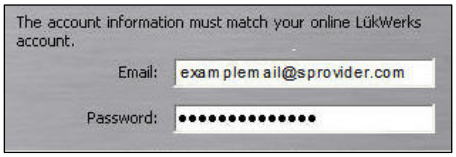


4. In the Current Email field, enter your current email address.
5. In the New Email field, enter the email address that you want to use for My LukWerks.

Note: It must be an active Internet email address.

6. Re-enter the email address in the Confirm Email field.
7. Click the button CHANGE USER LOGIN. An activation email will be emailed to you.
8. Open your email account and open the email that was forwarded to you by LukWerks. Follow the instructions in the email.
9. Now that you have changed your My LukWerks login name, you must change the Email login name in the Werks Software > Setup > Remote tab screen.

   If you do not change the Email on the Remote tab screen in Werks, then the Remote Viewing process will not recognize your account. Errors you may encounter include the following:



   - "Unknown Remote Viewing Account." This message displays on the Live screen, in the message panel.
   - "Disconnected–Account Unknown." This message displays on the Remote tab screen, in the Status section.

10. You can now go to www.lukwerks.com and log into My LukWerks using your new email.

Manage My LukWerks Page Overview

In this version, the Manage My LukWerks page is used to see details about a location and its cameras; for troubleshooting purposes by our support team; and for removing a location and/or cameras from Remote Viewing.

Here are some descriptions of the information and options available on this screen:

Column Name	Description
☐	Mark this checkbox when you want to remove a Location or a Camera. A Location or Camera is not removed until you click the REMOVE CHECKED button.
Status	"Online" indicates that the Werks Software system is running. "Offline" indicates that it is not on.
Last Connection Date	The date someone connected to this location.
Werks Version	The version of the Werks Software system running at this location.
MAC Address	The media access control address for the camera.
Version	The firmware version running on the camera.
REMOVE CHECKED	Removes the Locations or Cameras check marked.

Removing a Location or a Camera

Removing your location or cameras is perfectly safe and easy. Werks will re-register itself and any cameras to keep your My LukWerks accurate and fully up-to-date.

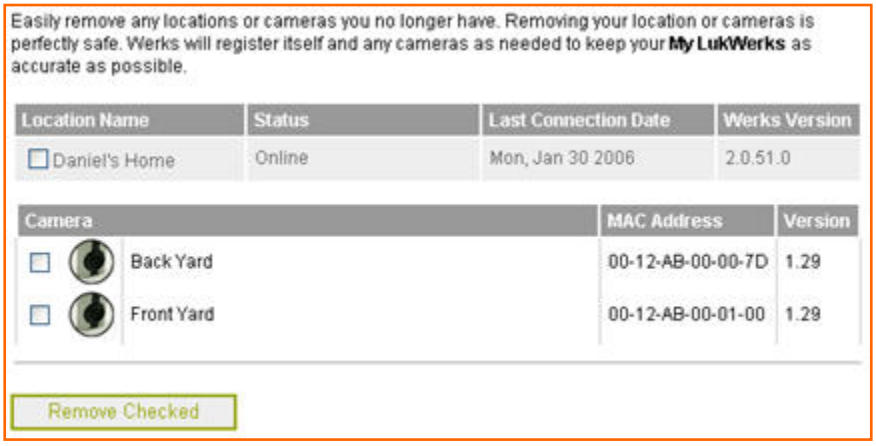
To remove a location or a camera, follow these instructions:

1. Go to www.lukwerks.com and click on the My LukWerks menu option.

   Note: If you previously marked the "Remember me next time" check box, the system will automatically open your My LukWerks page. If not, you need to Log In.

2. Click on the Location name link. If the Location name is "Location 1," like it is in this example, you would click on this.

The Manage My LukWerks page displays, as shown in the graphic below.



c. To remove the entire location, click the checkbox next to the location name and then click the REMOVE CHECKED button.

d. To remove one or more cameras, click the checkbox next to the cameras you wish to remove, and then click the REMOVE CHECKED button.

Note: Cameras that you don't want to show up for Remote Viewing must be removed from the Werks Software. As long as cameras are still assigned in the Werks Software, My LukWerks will recognize them and show them.

Viewing Your Cameras Using a Cell Phone or Handheld

The following requirements must be met prior to viewing remotely using a cell phone or handheld:

4) Registered for a My LukWerks account? If not, please see the topic "Create Your My LukWerks Account" for complete details.

5) Have enabled Remote Viewing in Werks? If not, please see the topic "Enable Werks for Remote Viewing."

6) Does your PDA or Cell Phone meet the system and browser requirements? To verify, please visit http://www.wilife.com/About/Requirements.aspx and view the section titled "Cell Phones and Handhelds."

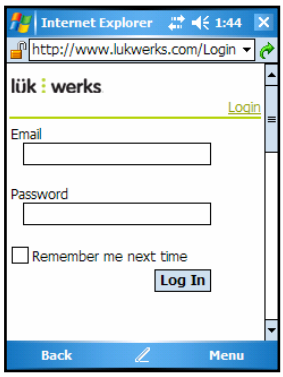
First Time PDA Viewing

If you are logging into My LukWerks for the first time, you will see the landing page. The landing page has three options:

- Login link
- My LukWerks button
- Live Demo button

> Hint: Click the LIVE DEMO button to connect to the demo site to view live video from a WiLife test location. This option can be used to test your handheld to make sure that it is compatible for remote viewing.

Because this is the first time opening My LukWerks, you need to login.



1. Click the Login link or the MY LUKWERKS button.
2. Enter the email address and your password.
3. Mark the checkbox "Remember me next time."
4. Click the LOG IN button.

> Note: Now that you have logged in, the website remembers you and will automatically direct you to the landing page. Simply click the button MY LUKWERKS.

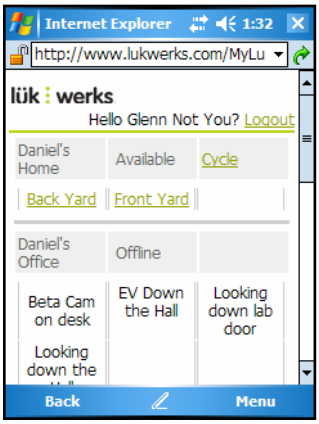
Using the My LukWerks Page (for Handhelds)

Your My LukWerks page allows you to see your LukWerk network all on one page.

In the example on the right, you will notice the names of your locations and cameras. You will see if a Location is Offline or Available.

Each camera name is a link that opens the Video Viewing Window and displays live video for the camera you selected.

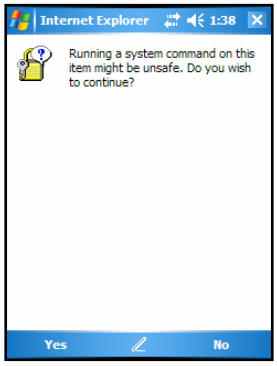
Active cameras appear in green and underlined text.



When you click on one of the camera links, you will see messages similar to these:

This window will display as long as LukWerks is connecting to the Werks system.

With handheld devices, there is a time limit of 3 viewing minutes. When the time expires, you are welcome to reconnect and view video again.



For some handheld devices, you will see a security message similar to this: "Running a system command on the item might be unsafe? Do you wish to continue?

Click "Yes."

Viewing a Camera's Live Video on a Handheld

The Video Viewing Window is used to show video from the camera you selected.

The window consists of the following sections:

- Name of the Location
- Status of the video feed (buffering, playing, stopped, etc.)
- Video Viewing Panel
- Player control panel that includes the time counter, time progression bar, percent of size of video panel, and basic player control buttons (full screen, stop, play, and decrease/increase video size).

6

Troubleshooting

We expect that you will rarely have problems with your LukWerks system. However, in the event of a problem, you will find solutions to those issues here. You can also find additional resources at www.lukwerks.com/support.

Below you will find specific tables directed at solving Installation, Configuration, Maintenance and other problems. Choose the one that best fits your circumstance.

> STOP – DO NOT RETURN THE CAMERA KIT TO YOUR RETAILER
> We are ready to help you get the most benefit from your LukWerks system! If you have any questions about setup or operation, please visit our online support site or call our toll-free line.

If one of these solutions does not solve your problem, please contact WiLife Customer Support and we will gladly assist you. You can contact us at support@lukwerks.com or call 1.877.LukWerk (1.877.585.9375).

Installation Problems

Installation Problem	Solution
Setup does not automatically run when inserting the CD	• Ensure that the CD label is facing up. • Open the CD from My Computer and double-click the autorun.exe program. • Check the CD for scratches or flaws. If you found problems, call LukWerks support for a replacement.
Werks does not automatically find my cameras	• Reset the camera by unplugging the power supply and then replugging it in to the wall. • Verify that the camera power supply and the USB receiver have power by checking if the status lights have power. • Verify that the camera power supply and the USB receiver are plugged directly into a power outlet and not a power strip or UPS. • Ensure the Ethernet cable between the camera and power supply is secure. • Ensure the USB receiver is plugged securely into the PC. • Verify that you have properly configured any PC firewalls by reviewing the chapter on *Configuring Your PC Firewall*. • Close other applications that may be interfering with Werks. • Test another outlet for your camera, perhaps one closer to your PC. • Click the REDISCOVER button on the Setup>Advanced dialog. • Verify that the camera ON/OFF button on the main window is set to ON. • Refresh your environment. To do this, 1) restart you computer, 2) reset your USB by removing and reconnecting the USB-to-PC cable, and 3) reset your cameras by unplugging and re-plugging them into the power outlet. • Verify that your powerline network has proper IP address setup. If you have been running Werks V1.4, this will be an IP address of 169.254.X.X. After you have installed and run Werks V1.5, your Werks USB adapter should have two network addresses: 172.X.X.X and 169.X.X.X (seen via the Advance button in Network Connections / TCP/IP Properties of Windows Control Panel).
My cameras appear for a few seconds an then go away	This problem is most commonly caused by a USB socket that is underpowered. These sockets do not provide the electricity necessary to power the LukWerks receiver. This is most common in PC's built prior to 2001. You have two options: • Add a new USB 2.0 card to your PC or laptop • Add a powered USB hub between your USB socket and the LukWerks USB receiver.

Installation Problem	Solution
Camera suction cup comes free from the window	• Clean the window to ensure an airtight fit. • With your fingertip, place a very light layer of vegetable or olive oil around the edge of the suction cup. • Always use the strain relief mini-suction cup for added safety by attaching it to the glass and cable.

Setup Problems

Setup Problem	Solution
After a few minutes or even seconds Werks drops my camera	• On older machines (pre 2001), some USB sockets may be underpowered or incompatible with the USB 1.1 standard. Upgrade your computer by adding a USB 2.0 card or hub. • Check your firewall settings. Some firewalls close communications after a few seconds of operations.
The cable connecting the camera to the power supply is too short	• You may purchase a longer Ethernet cable or Ethernet Cable Coupler at our online accessory store. • Purchase a standard CAT5e Ethernet cable from you local computer accessory retailer (up to 80 feet). (Note: crossover CAT5 cables will not work with our system.)
My primary camera is shown in the second camera position	From the Live Mode, click on a video panel and drag it to the panel you want it to display. This rearranges camera order.
My cameras are recording too frequently	• Reduce camera motion Sensitivity on the Setup>Recording dialog. • Reduce the size or number of motion zones.
My camera is not following my recording schedule	• Ensure the camera ON/OFF button on the main screen is ON. • Verify that your computer clock is correct. • Check your recording schedule to validate the days-of-the-week and times. Remember 12AM is midnight, not noon. • Check your recording schedules to ensure you do not have overlapping schedules that conflict.
I do not know my SMTP account information	• Contact your email provider for details on connecting to their SMTP server. You can usually find this information on your email provider's Internet support page. • Create a new email account using gMail or other email services that supports SMTP (www.gmail.com).
My alert emails are being rejected because of size	Most email providers limit the maximum size of emails and limit the cumulative size of all emails in your system. • Delete or archive outdated emails from your system. • Contact your email vendor to have them configure your account for larger email messages. • Select a smaller alert message type. The "Send Text Message" is smallest and the "Send Video Frame" email is usually about 50KB.
I am getting too many email messages	Werks sends an email alert when a camera detects motion and the length of the motion meets or exceeds your settings. To reduce the number of messages, you can: • Reduce recording events by reducing motion sensitivity or changing motion zones on the Setup>Recording dialog. • Increase the Minimum Motion time on the Setup>Email dialog. • Increase the Maximum Frequency time on the Setup > Email dialog.

Video Problems

Video Problem	Solution
My video is fuzzy	• Clean the lens glass with soft cloth designed for cleaning eyeglasses. This will remove any dust or dirt. • If your camera is pointing out a window, clean the glass inside and out. • Focus the camera by gently turning the outer lens clockwise or counter clockwise. You will find this easiest by plugging the camera into a power outlet near your PC. (See the section on *Focusing and Aiming the Camera* in the *Getting Started* chapter of this documentation for more information.) • If you are trying to focus on an item less than 3 feet from the camera, you may want to try a lens with a shorter focal point from our online accessory store.
My video is too dark or too light	• Ensure the camera has sufficient light. • Use the Setup>Camera options to adjust the camera brightness and contrast options. We find Auto Brightness performs best in changing light conditions.
My video windows are black and do not show video	• Upgrade your video drivers to the latest version. You can find these drivers on the manufactures support website. • Verify that you have installed the latest version of Windows Media Player. • Reboot your computer to reset the video card.
I cannot see images in low light conditions	• Check the Setup > Camera > Auto Brightness option to allow the smart Luk Camera to automatically adjust to changing lighting conditions. • Increase the lighting of your target scene. • Watch for our soon to be released outdoor day/night camera.
I cannot see the detail I need in on-screen objects	• Clean the lens glass with a soft cloth to remove any dust or dirt, being careful not to scratch the glass. • Focus the camera by gently turning the outer lens clockwise or counter clockwise. You will find this easiest by plugging the camera into a power outlet near your PC. (See the section on *Focusing and Aiming the Camera* in the *Getting Started* chapter of this documentation for more information.) • Change the image resolution from QVGA (320 x 240) to VGA (640 x 480) in the Setup>Camera dialog. • Increase the camera Bit Rate on the Setup>Camera dialog. • Increase the lighting in the room. • Upgrade the camera lens using one from our accessory store (www.lukwerks.com).
My live video lags several seconds behind the real motion	This is most commonly caused by wiring that is poor or by unusual noise on the wiring system. An underpowered computer or video card can also cause it. • Plug your camera into an outlet on the same circuit as your PC to test if this line noise or poor wiring is the cause of the problem. • Test connecting your camera and USB receiver into other outlets that may not have the wiring or noise problem. • Reduce the number of live video windows you have displayed.
My camera view is too narrow or too wide	Your Luk Camera was shipped with a wide angle lens that should fit most applications. If you find you have need for wider or narrower viewing angles, check out our additional lenses at www.lukwerks.com.
Live video skips and jumps	LukWerks was tuned to ensure high-quality recording first, and great live viewing second. You may find that live video skips from time-to-time if your PC is underpowered or your Homeplug network is overloaded. Here are a few adjustments to improve live video viewing: • Reduce the frames per second (fps) on the camera setup. • Reduce the video quality to QVGA from VGA. • Ensure you are running a PC that meets the minimum system requirements, and preferably one that matches the recommended system requirements. • Close unneeded applications running on your computer • Run virus and spyware detection software to ensure your computer is clean. • Some power outlets are not wired well; test your camera by plugging it into a power outlet closure to your USB Receiver (for best results, try using the same outlet for both).

Maintenance Problems

Maintenance Problem	Solution
My CPU is pegged at 100%	• Test if Werks.exe is using the CPU by checking Task Manager (CRTL-ALT-DEL>Task Manager>Process Tab). • If Werks is taking the CPU do one or more of the following: • Reduce the number of live cameras you are viewing from the 6-camera view to the 4-camera view, or from 4-camera view to 1-camera view. • Reduce camera resolution from 640 x 480 to 320 x 240.
Message "Password does not match password in powerline adapter"	This usually occurs when you change the USB receiver attached to your PC or you change the PC used to run Werks. Follow these steps in either case: • Enter your former password into the Old Password field. • Enter your former password (recommended) into the New Password fields. • Validate that you can now see your cameras. If not, follow the steps for the "I have forgotten my local LukWerks password" problem and solution.
I have forgotten my local LukWerks password	Follow these steps to reset your local LukWerks password: 1. Exit Werks from the task tray icon. 2. Click My Computer from the Start menu. 3. In the address field, enter the path: `"C:\Documents and Settings\All Users\Application Data\WiLife\LukWerks"` 4. Select and delete the file `Werks.ini`. 5. Reset each camera by pressing the reset button on the bottom of the camera with a paperclip while the camera is powered. 6. Restart Werks. Werks will prompt you for a new password. 7. From Werks, enter Setup>Advanced and click the Add New cameras button. 8. You are now back up and running.
A friend gave me a camera and I do not know its password	Remember that passwords are stored in the camera's power supply, not the camera. If you get a new camera & power supply from a friend or from eBay you will need to reset the password before installing the camera. Follow these steps to clear the old password: 1. Power-up your camera by plugging in the power supply and connecting the camera using the Ethernet cable. 2. Wait until the camera's green status lights are flashing 3. While the camera is on, reset the camera by gently pressing a paperclip against the reset button hidden below the small hole next to the camera's Ethernet connector. 4. Follow the steps in this manual for adding a new camera.

Maintenance Problem	Solution
Werks does not see my cameras	• Reset the camera by unplugging the power supply and then replugging it in to the wall. • Verify that the camera ON/OFF button on the main Werks window is set to ON. • Verify that the camera power supply and the USB receiver have power by checking the status lights, some of which flash and others which are solid on. • Verify that the camera power supply and the USB receiver are plugged directly into a power outlet and not a power strip or UPS. • Ensure the Ethernet cable connecting the camera with the power supply is secure. • Ensure the USB receiver connected securely into the PC. • Verify that you have properly configured any PC firewalls by reviewing the chapter on *Configuring Your PC Firewall*. • Close other applications that may be interfering with Werks. • Test another power outlet for your camera, perhaps one closer to your PC. • Click the REDISCOVER button on the Setup > Advanced dialog. • Refresh your environment. To do this, 1) restart you computer, 2) reset your USB by removing and reconnecting it PC-to-USB cable, and 3) reset your cameras by unplugging and re-plugging them into the power outlet. • Reset each camera by pressing the reset button on the bottom of the camera by gently inserting a paperclip into the small hole near the network connector. • From the Setup>Advanced dialog, execute the Add New and Rediscover camera operations.
Werks seems to run slowly	Werks is a 21st century application and is tuned for use on modern PCs. Though we provide minimum system requirements for running Werks, you may find some functions operate slowly on underpowered machines. • Ensure you are running a PC that meets the minimum system requirements, and preferably one that meets the recommended system requirements. • Close unneeded applications running on your computer. • Run virus and spyware detection software to ensure your computer is clean.
My camera is not recording motion	Werks uses two methods to record video: Camera Motion Detection and user defined Recording Schedules. If you have disabled both of these options, cameras will not record. Check the following to ensure recording is configured properly: • Check the Setup > Recording options page for each camera and ensure the camera has defined motion zones. • Ensure the “Enable motion detection for camera” checkbox is checked. • Check your camera recording schedule to ensure the cameras are turned on (not scheduled to be Off) • Increase your motion sensitivity settings.
Werks is not sending email alerts	Werks requires four elements to send an email alert. Check the following items on the Setup > Email dialog for each detected camera: • Ensure you have properly set the SMTP server settings and executed the TEST button operation. • Verify your “Send Email to” email addresses are correct. • Choose the alert action for each camera. • Ensure the “Enable Email Alerts” option is checked. • Adjust the Minimum Motion time to meet your needs. • Check the Spam Blocking options for your receiving email account.
I am unable to see my site or cameras from My LukWerks account	To view your cameras remotely you need four items: proper Werks configuration, an active My LukWerks account, Internet connectivity, and a compatible remote device. Check the following items: • Ensure that you have created a My LukWerks account by registering at www.lukwerks.com. • Verify that your account name (email address) and password match those used to create your account. • Test your account information accuracy by going to the Setup > Remote dialog and clicking the APPLY CHANGES button. • Test your internet connection from your device by opening an Internet browser on the device and going to the www.lukwerks.com site. • Test the compatibility of your Internet Browser or Cell Phone by reviewing our documented system requirements.

Status Lights

We incorporated Light Emitting Diodes (LEDs) as part of our design for the Luk Camera, Power Supply, and USB receiver to make it easy to quickly diagnose many problems.

Camera Status Lights

There are six status lights (LEDs) on the camera in various locations. Point the camera lens toward you with the three green LEDs on the right-hand side to read the following table.

LED	Description
Top Green	Flashes when the camera captures a video frame
Middle Green	Flashes when the camera encodes a video frame
Bottom Green	Flashes when the camera sends a video frame to Werks
Front Red	On when camera has power and flashes when it detects motion. Note that you can disable this LED from the advanced camera setup
Bottom Green	Located near the network connector, the green light is on when the camera has successfully started its internal software
Bottom Amber	Also located near the network connector, the amber light flashes when it sends data over the network. It flashes slowly when communicating with the power supply only and quickly when sending data to the Werks application

Power Supply Status Lights

There are five status lights on the Luk Camera power supply.

LED	Description
Top Green	Steady green when power supply has power
Middle Green	Steady green when the power supply is connected to the Homeplug network
Bottom Green	Flashes when sending and receiving data to the camera
Bottom Green	Located near the network connector, the green light is on when the camera has successfully linked to the camera
Bottom Amber	Also located near the network connector, the amber light flashes when sending and receiving data to the camera. It flashes slowly when communicating with the camera only and quickly when sending date between the camera and Werks

USB Receiver Status Lights

There are three status lights on the USB Receiver. Because the USB Receiver gets its power from the USB port, these lights will be on even when you have not plugged the receiver into an outlet.

LED	Description
Top Green	Flashes when it detects a collision between two network packages (normal)
Middle Green	Flashes green when sending and receiving data from the cameras
Bottom Green	Solid green when successfully linked to the computer

7

Configuring Your Firewall

Firewall Basics

Firewall configuration issues are our most common support call. In this chapter, we help you understand and configure your firewall, saving you and us the trouble of a support call.

Simply put, a firewall is a device, software or hardware, which controls the flow of network traffic between your computer and the outside world. Having a good firewall is important to prevent hackers and viruses from getting access to your computer.

Many popular firewalls run directly on your PC; they include Microsoft Firewall, Symantec Internet Security, ZoneAlarm, BlackICE, McAfee Personal Firewall, and many others. Each vendor provides a different interface for network management and use different rules for protecting your computer. Many of them have built screens and dialogs that automatically prompt you to allow and disable network access for specific programs.

Internet Filters

Internet filters are a different form of network firewall. They work to protect individuals and computers from accessing potentially objectionable materials. These filters capture internet requests and either block or allow them depending on whether they pass their internal tests. Like firewalls, Internet Filters can block communications with your Luk Cameras.

LukWerks Firewall Requirements

While firewalls are useful in protecting access to your PC, in order for you to view cameras in your home or business and for remote viewing, you will need to allow firewall access to LukWerks. LukWerks uses two networks.

First, the Werks software connects to each of your Luk Cameras on your Homeplug powerline network or other LAN network.

LukWerks Networking Protocols

Name	Description	Network
UPnP Discovery	UDP: port 1900	Powerline
UPnP Control	TCP: ports 50000-65000	Powerline
Video Streaming	TCP: port 22211	Powerline
Camera Control	TCP/UDP: ports 5800-5821	Powerline
Remote Viewing	TCP: ports 20570-20575	Internet
DHCP	UDP: port 67incoming, port 68 outgoing	Powerline

Second, the Werks software connects to the Internet to provide you with Remote Viewing access to your video. In communicating, two common protocols Werks uses include UPnP (Universal Plug and Play) and HTTP (on a variety of ports).

By design, Firewalls and Internet Filters attempt to control communications on both of the internal LukWerks network and your Internet connection. This is not a problem if you configure them correctly. Remember, it is common to have more than one firewall installed on a PC.

You may also need to create a firewall entry to allow DHCP address assignment. This requires you to open port 67 (incoming) and 68 (outgoing) for UDP traffic on all IP addresses (i.e., broadcast messages).

Below you will find descriptions of both the automated and manual methods for configuring many popular firewalls.

Microsoft Firewall

Microsoft Firewall is a standard component for Windows XP, Service Pack 2 (SP2). Microsoft does a good job of automatically asking users to allow Werks to access the network. This automatic configuration method is sufficient in most cases. Here we provide you with instruction for both the automatic and manual configuration methods.

Windows Security Alert
To help protect your computer, Windows Firewall has blocked some features of this program.
Do you want to keep blocking this program?
Name: Werks
Publisher: WiLife
Keep Blocking
Unblock
Ask Me Later
Windows Firewall has blocked this program from accepting connections from the Internet or a network. If you recognize the program or trust the publisher, you can unblock it. When should I unblock a program?

Enable Werks Automatically

When you first start Werks, Microsoft Firewall will automatically provide you with a Windows Security Alert, asking you whether you want to block Werks. You should always choose UNBLOCK when the program name is Werks and the publisher is WiLife.

Enable Werks Manually

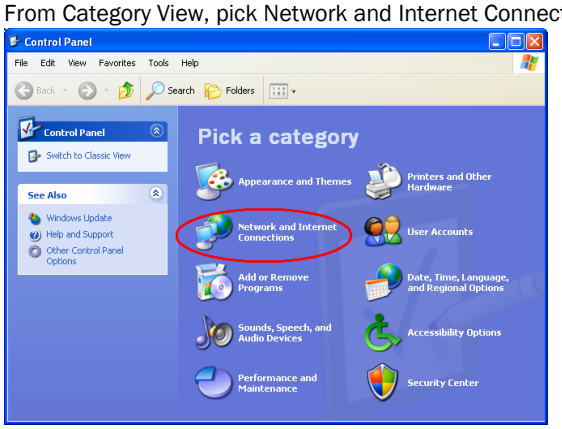
In some cases, Windows may not provide you with the automatic alert or you may mistakenly choose to block Werks. In these and other cases, you need to configure the firewall rules manually.

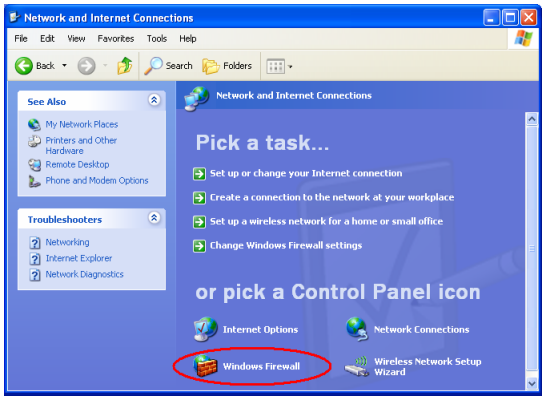
Follow these step-by-step instructions:

1) Open the Control Panel from the Start menu.

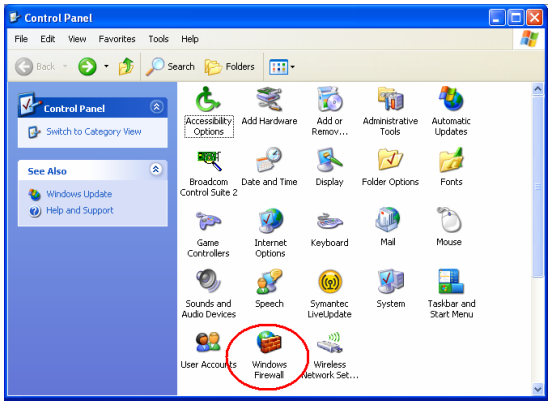
   Next, open the Windows Firewall using one of the two examples below:

From Category View, pick Network and Internet Connections and then Windows Firewall.

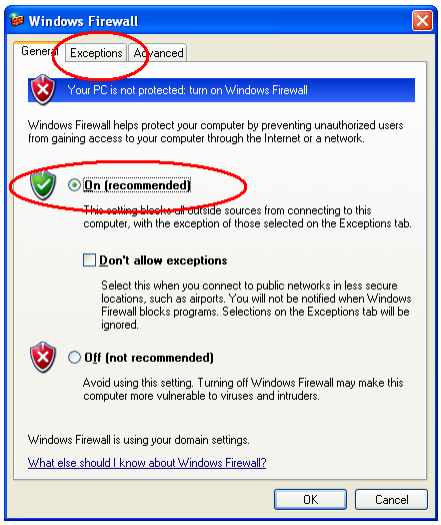


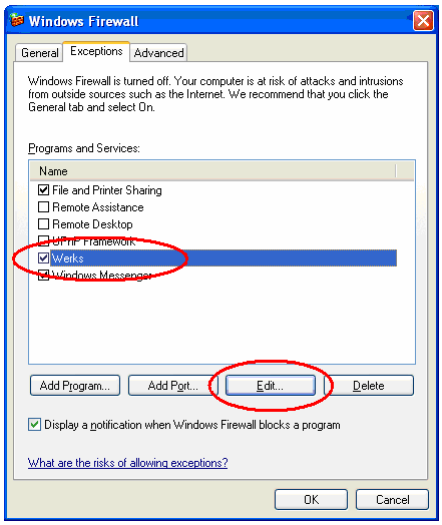

Network and Internet Connections
Pick a task...
Set up or change your Internet connection
Create a connection to the network at your workplace
Set up a wireless network for a home or small office
Change Windows Firewall settings
or pick a Control Panel icon
Internet Options
Network Connections
Windows Firewall
Wireless Network Setup Wizard

In the Classic View, choose Windows Firewall.

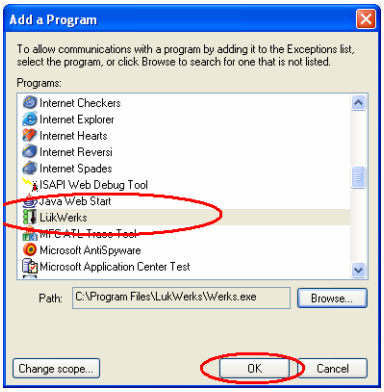


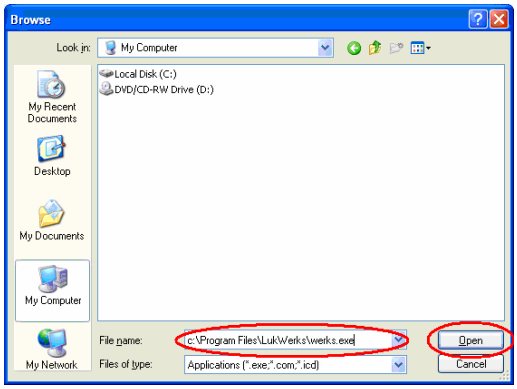
If the Windows Firewall is enabled (On), select the Exceptions tab. On the Exceptions tab, check the Werks box to enable it for network communications. Next, click on the EDIT button.


Windows Firewall
General
Exceptions
Advanced
Your PC is not protected: turn on Windows Firewall
Windows Firewall helps protect your computer by preventing unauthorized users from gaining access to your computer through the Internet or a network.
On (recommended)
This setting blocks all outside sources from connecting to this computer, with the exception of those selected on the Exceptions tab.
Don't allow exceptions
Select this when you connect to public networks in less secure locations, such as airports. You will not be notified when Windows Firewall blocks programs. Selections on the Exceptions tab will be ignored.
Off (not recommended)
Avoid using this setting. Turning off Windows Firewall may make this computer more vulnerable to viruses and intruders.
Windows Firewall is using your domain settings.
What else should I know about Windows Firewall?
OK
Cancel

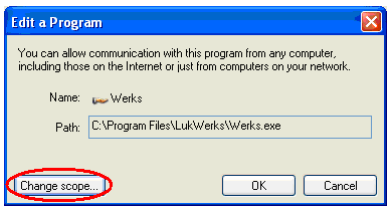


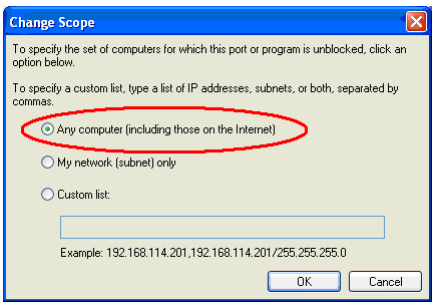
If you do NOT see Werks in the Programs and Services list (rare), you will need to choose Add Program... and find Werks either in the list of programs or Browse to it at "C:\Program Files\LukWerks\Werks.exe.





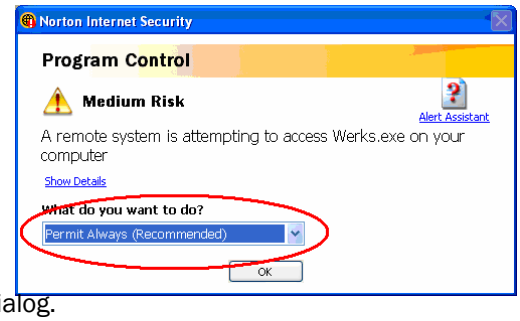
From the Edit a Program dialog, click the "Change scope..." button and then select the option "Any computer" as shown. Finally, click OK to close each dialog.




Change Scope
To specify the set of computers for which this port or program is unblocked, click an option below.
To specify a custom list, type a list of IP addresses, subnets, or both, separated by commas.
Any computer (including those on the Internet)
My network (subnet) only
Custom list:
Example: 192.168.114.201,192.168.114.201/255.255.255.0
OK
Cancel

Remember that you may have more than one firewall application running on your PC. You will need to configure each one.

Norton Internet Security 2001 - 2005

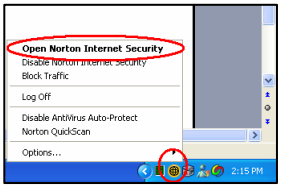


Norton Firewall is a component of several Symantec security products including Norton Internet Security, Norton Personal Firewall, Symantec Client Security, and others. In most cases, Norton will automatically recognize that Werks is attempting to access the network. It will display a quick configuration dialog. **You must follow all of these steps to ensure Norton 2001-2005 will not block Werks!**

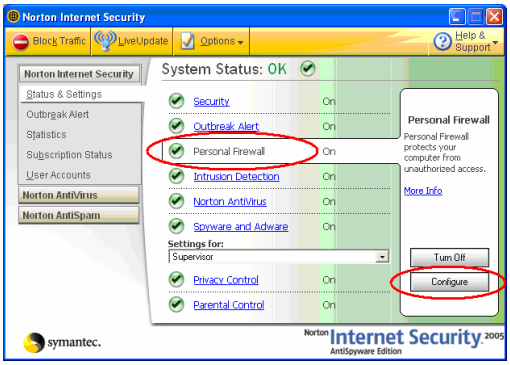
1) Run Werks to allow Norton to display Program Control dialog.

   If Norton displays the Program Control dialog, choose "Permit Always". In any case, continue to the next steps.

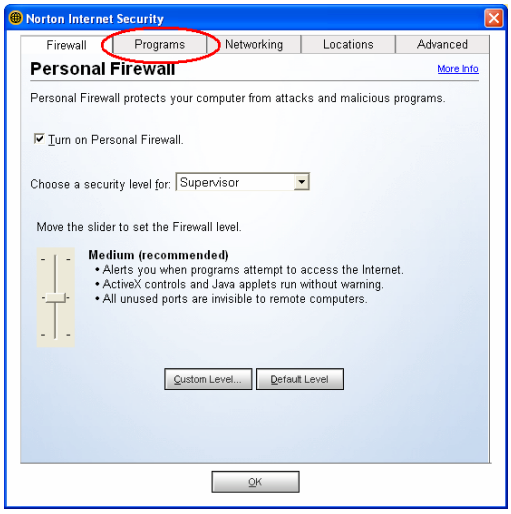
   Open "Norton Internet Security" from the system tray (shown) or from the Start...All Programs menu.

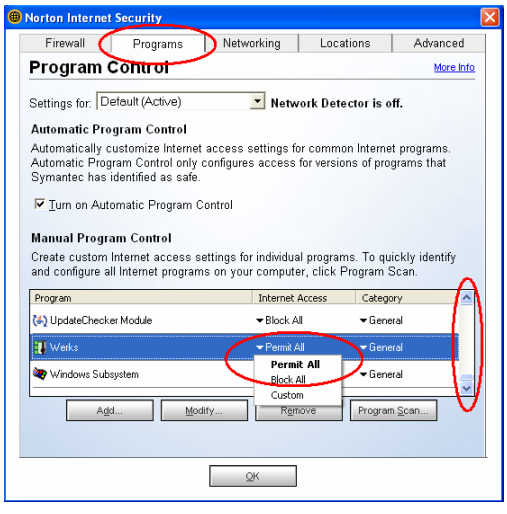


   On the Norton Internet Security management screen, click Personal Firewall. (Note: the dialog may look different depending on your version of Norton.) Next, click the CONFIGURE button under the Personal Firewall section.

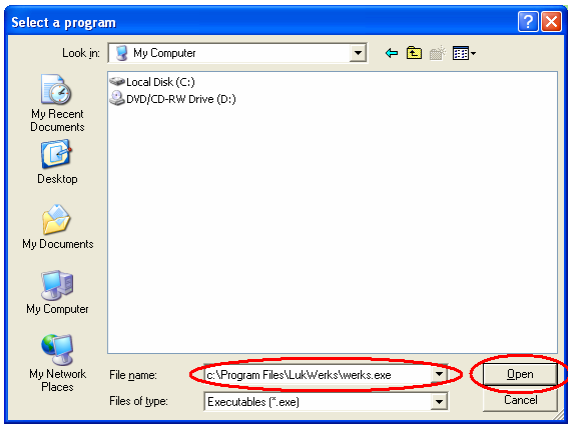


From the Personal Firewall page, click Programs tab. In the Manual Program Control window, scroll down until you find Werks. Here you need to set the Internet Access to "Permit All".



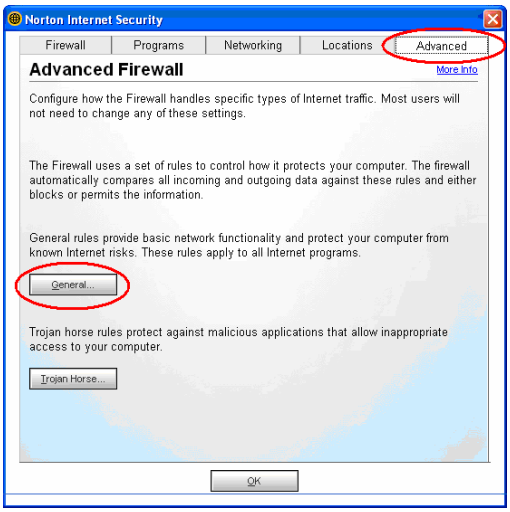


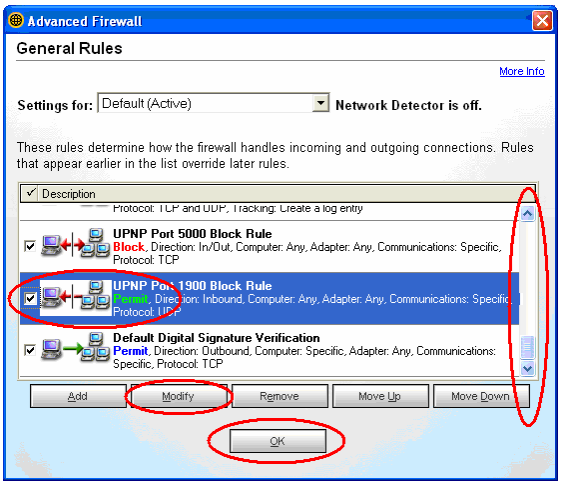
If you do NOT find Werks in the Program list (rare), you will need to click the Add button. On the program dialog, enter the file name “c:\Program Files\LukWerks\werks.exe” and click Open. Now repeat the previous step.



Finally, click on the Advanced tab and then the GENERAL button. On the General Rules Screen, scroll down to the rule “UPNP Port 1900 Block Rule.”

Click on the Modify button and change the rule from Block to Permit. Leave the rule checked and then click OK to accept the change.


Norton Internet Security
Firewall
Programs
Networking
Locations
Advanced
Advanced Firewall
More Info
Configure how the Firewall handles specific types of Internet traffic. Most users will not need to change any of these settings.
The Firewall uses a set of rules to control how it protects your computer. The firewall automatically compares all incoming and outgoing data against these rules and either blocks or permits the information.
General rules provide basic network functionality and protect your computer from known Internet risks. These rules apply to all Internet programs.
General...
Trojan horse rules protect against malicious applications that allow inappropriate access to your computer.
Trojan Horse...
OK


Advanced Firewall
General Rules
More Info
Settings for:
Default (Active)
Network Detector is off.
These rules determine how the firewall handles incoming and outgoing connections. Rules that appear earlier in the list override later rules.
Description
UPNP Port 5000 Block Rule
Block, Direction: In/Out, Computer: Any, Adapter: Any, Communications: Specific, Protocol: TCP
UPNP Port 1900 Block Rule
Permit, Direction: Inbound, Computer: Any, Adapter: Any, Communications: Specific, Protocol: UDP
Default Digital Signature Verification
Permit, Direction: Outbound, Computer: Specific, Adapter: Any, Communications: Specific, Protocol: TCP
Add
Modify
Remove
Move Up
Move Down
OK

You have now successfully configured Norton Firewall, but remember that you may have more than one firewall application running on your PC. You need to disable or configure each one.

Finally, you may need to exit Werks (from the task icon) and restart for the changes to take effect.

Norton Personal Firewall 2006

Norton Personal Firewall 2006 is a component of several Symantec security products that include Norton Internet Security, Norton Personal Firewall, Norton AntiVirus, Symantec Client Security, and others.

While you are installing Werks, Norton Internet Security will automatically recognize Werks attempting to access the network. It will prompt you with this Security Alert.

Norton Internet Security
Security Alert
Medium Risk
Alert Assistant
Werks.exe is attempting to connect to a DNS server.
Show Details
What do you want to do?
Always allow connections from this program on all ports (recommended)
OK

Leave the setting as "Always allow connections from this program on all ports."

Click OK.

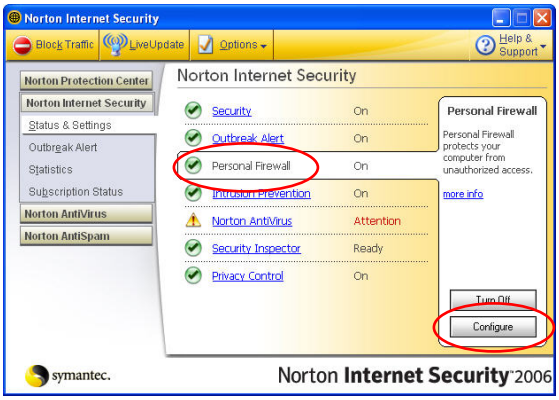
Norton Internet Security will also recognize that Werks is attempting to access the Internet. It will prompt you with this Program Alert.

Leave the setting as "Allow always" and click OK.

Validate the Setup

We expect these settings will configure Werks completely for Norton 2006. However, we recommend that you follow these steps to ensure the settings are accurate:

8) Open "Norton Internet Security" from the system tray (shown) or from the Start...All Programs menu.
9) On the Norton Internet Security management screen, click Personal Firewall.
10) Click the Configure button under the Personal Firewall section.
11) From the Personal Firewall page, click Programs tab.
12) In the Manual Program Control section, scroll down until you find Werks.

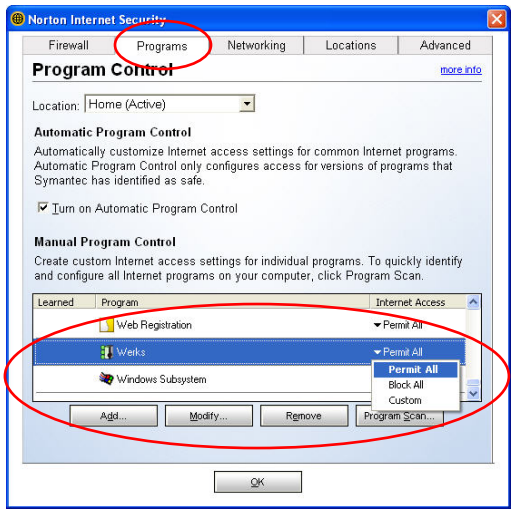


13) Here you need to set the Internet Access to "Permit All."
Click OK.

NOTE: If you do NOT find Werks in the Program list (rare), you will need to click the Add button.

On the program dialog, enter the file name "c:\Program Files\LukWerks\werks.exe" and click Open.

Now repeat the previous step.



You have now successfully configured Norton Firewall 2006.

Note: If you may have more than one firewall application running on your PC, you need to disable or configure each one to run with Werks.

Norton AntiVirus 2007

The Norton AntiVirus firewall has an aggressive worm protection feature that blocks Werks from giving the cameras a DHCP address when you install Werks Version 1.5. Even if you have set AntiVirus to allow Werks, AntiVirus still blocks that traffic. These instructions assist you in temporarily disabling Worm Protection until the Luk Cameras have received an address.

Note: This will affect you when you update the firmware after installing Werks version 1.5. (Version 1.4 is not affected.)

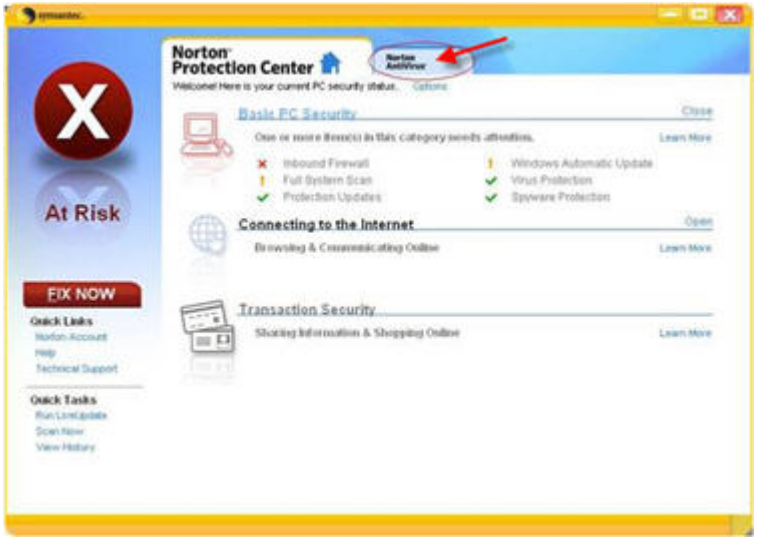
14) Open the Norton Protection Center and click on the Norton AntiVirus tab.

Norton AntiVirus 2007

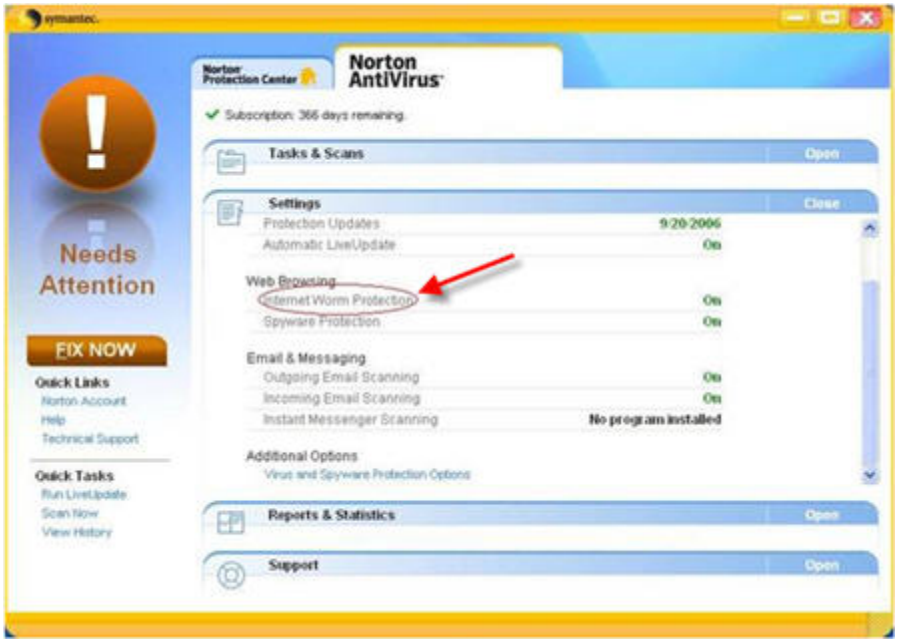
The Norton AntiVirus firewall has an aggressive worm protection feature that blocks Werks from giving the cameras a DHCP address when you install Werks Version 1.5. Even if you have set AntiVirus to allow Werks, AntiVirus still blocks that traffic. These instructions assist you in temporarily disabling Worm Protection until the Luk Cameras have received an address.

Note: This will affect you when you update the firmware after installing Werks version 1.5. (Version 1.4 is not affected.)

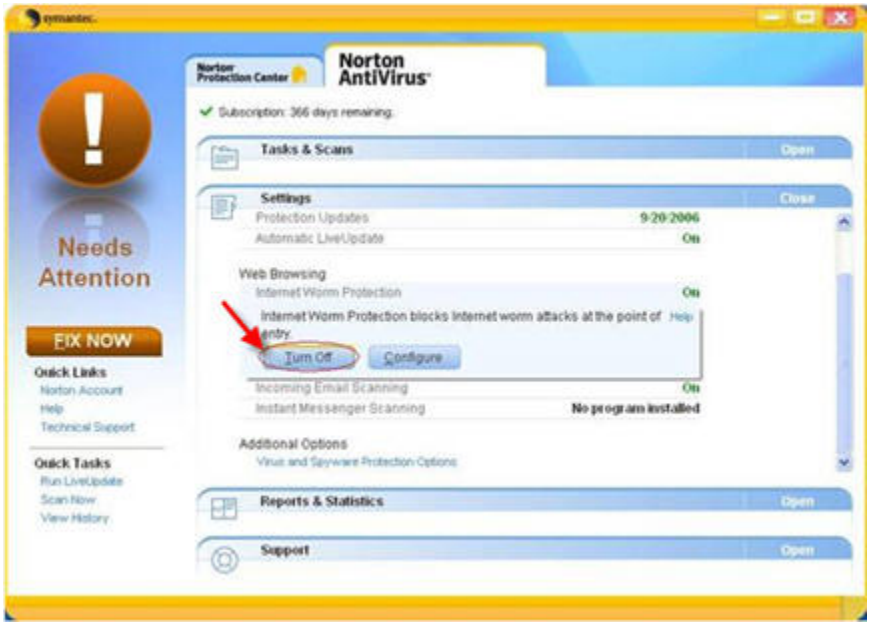
1) Open the Norton Protection Center and click on the Norton AntiVirus tab.



2) Click on the Settings option and click on “Internet Worm Protection.”



3) Click on the “Turn Off” button.



4) Click OK. Werks only needs the feature turned off temporarily.

5) In the Werks Software, open the Setup program, click on the Advanced tab, and click on the Find My Cameras button. Follow the instructions of the Wizard. Your camera(s) should be located and up and running within minutes.

ZoneAlarm Firewall

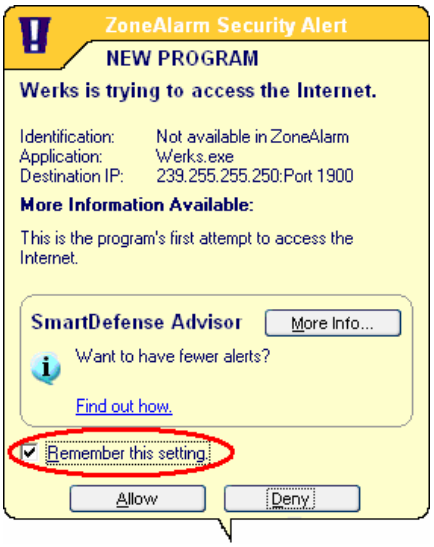
Zone Labs produces several computer security packages including ZoneAlarm Pro and ZoneAlarm. Though there are differences in the UI, they are largely the same. Like other PC firewall products, Zone Labs provides both automatic and manual configuration interfaces. By default, ZoneAlarm will automatically prompt you to allow Werks.exe to both access the Internet and to act as a server. Follow these instructions to ensure ZoneAlarm does not interfere with the operation of LukWerks.

ENABLE WERKS AUTOMATICALLY

When you first start Werks, Zone Alarm will automatically provide you with a ZoneAlarm Security Alert, asking you whether you want to block Werks. You should always choose ALLOW when the program name is Werks.exe and the publisher is WiLife.

1) Run Werks.

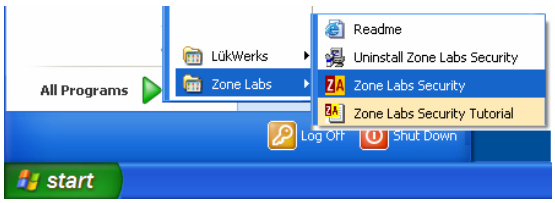
   Check “Remember this setting” and click the Allow button on both the “New Program” and “Server Program” dialogs.

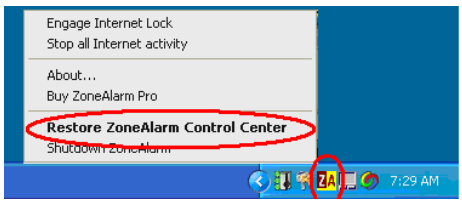


ENABLE WERKS MANUALLY

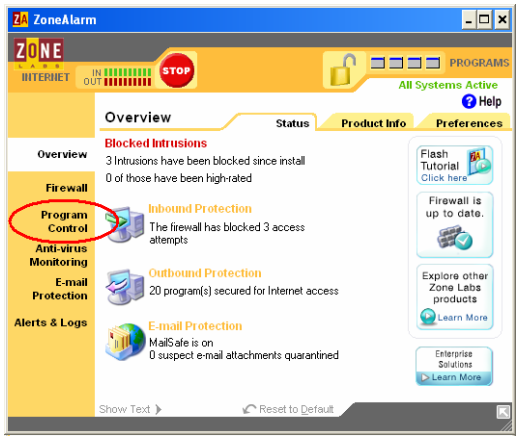
In some cases, you may need to manually configure ZoneAlarm. This process is not difficult. Follow these steps to complete the manual firewall setup:

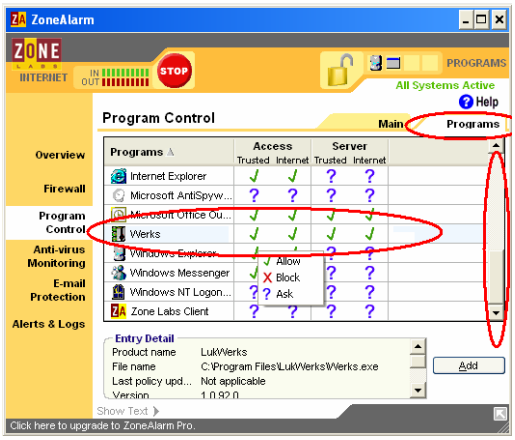
1) Open the ZoneAlarm control center either from the Start menu or by right-clicking on the ZoneAlarm icon in the Windows Task bar.



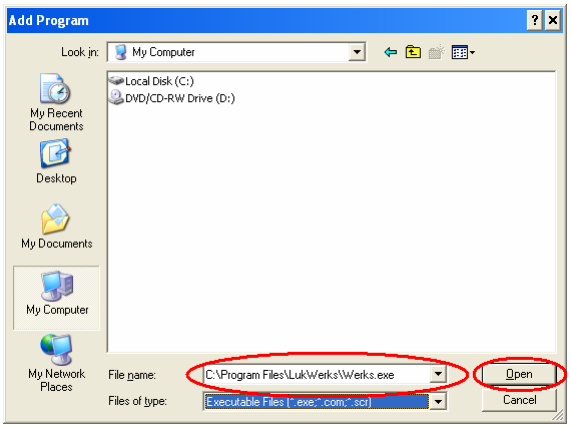


On the ZoneAlarm Control page, click the Program Control option to show the Program Control Page. Then click the Programs tab and scroll down to the Werks program. Set each Access and Server option to Allow (as shown).





If you do NOT find Werks listed as a program, you will need to click the ADD button to manually add Werks to the list. In the Add Program dialog, enter the path to Werks, which by default is “C:\Program File\LukWerks\Werks.exe”. Click OPEN and repeat the prior step.

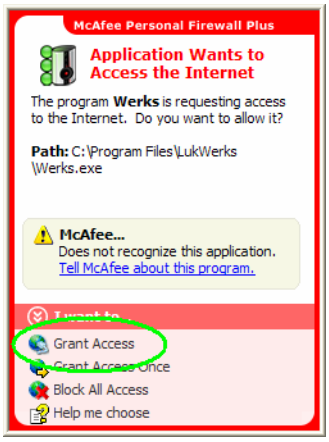


You have now successfully configured ZoneAlarm, but remember that you may have more than one firewall application running on your PC. You need to disable or configure each one.

Finally, you may need to exit Werks (from the task icon) and restart for the changes to take effect.

McAfee Personal Firewall

McAfee distributes its firewall product in several packages including Internet Security Suite, Personal Firewall Plus, and Desktop Firewall. Though there are differences in the UI, they are largely the same. Like other PC firewall products, McAfee provides both automatic and manual configuration interfaces. By default, Personal Firewall will automatically prompt you to allow Werks.exe to access the Internet. Follow these instructions to ensure the McAfee firewall does not interfere with the operation of LukWerks.


McAfee Personal Firewall Plus
Application Wants to Access the Internet
The program Werks is requesting access to the Internet. Do you want to allow it?
Path: C:\Program Files\LukWerks \Werks.exe
McAfee...
Does not recognize this application.
Tell McAfee about this program.
Grant Access
Block All Access
Help me choose

Enable Werks Automatically

When you first start Werks, McAfee Firewall will automatically provide you with a security notice, asking you whether you want to Grant or Block Internet access. You should always choose GRANT ACCESS when the program name is Werks.exe.

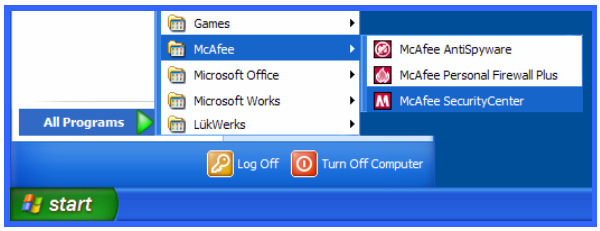
1) Run Werks

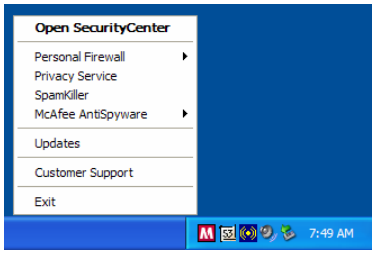
   Check “Remember this setting” and click the Allow button on both the “New Program” and Server Program dialogs

Enable Werks Manually

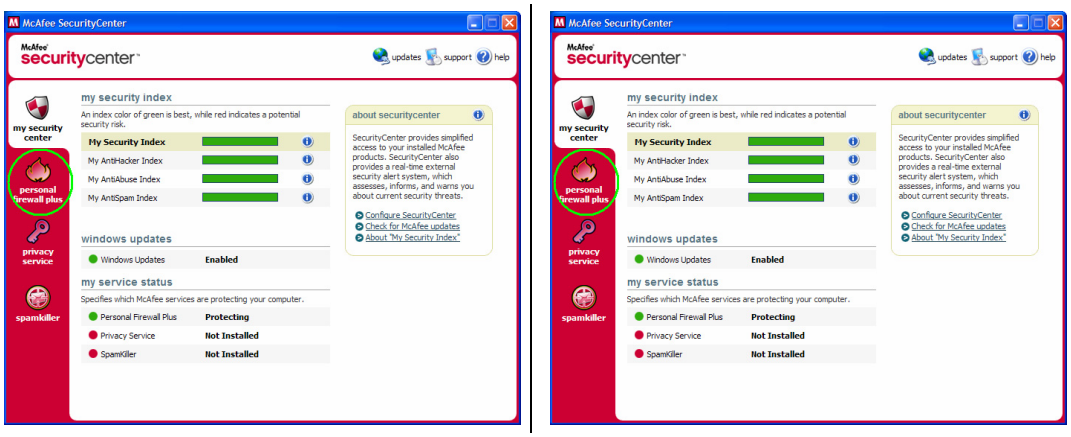
In some cases, you may need to manually configure the firewall. This process is not difficult. Follow these steps to complete the manual firewall setup:

1) Open the McAfee SecurityCenter either from the Start menu or by right clicking on the McAfee icon in the Windows Task bar.

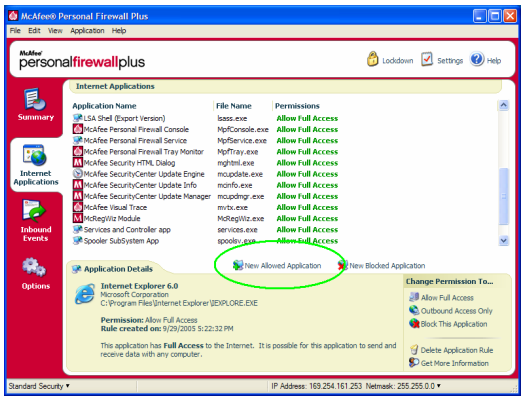


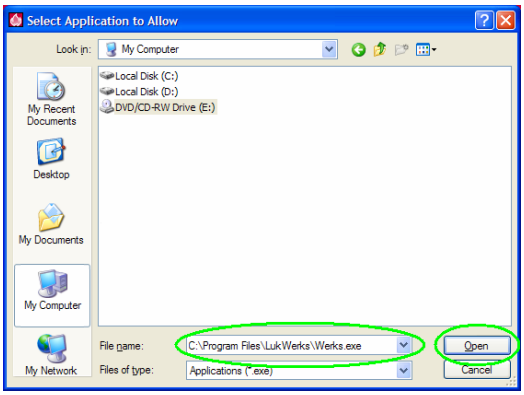


On the McAfee SecurityCenter page, click the Personal Firewall Plus tab to show the Firewall Control Page. Next click the “View the Internet Application List” to show a list of managed programs.

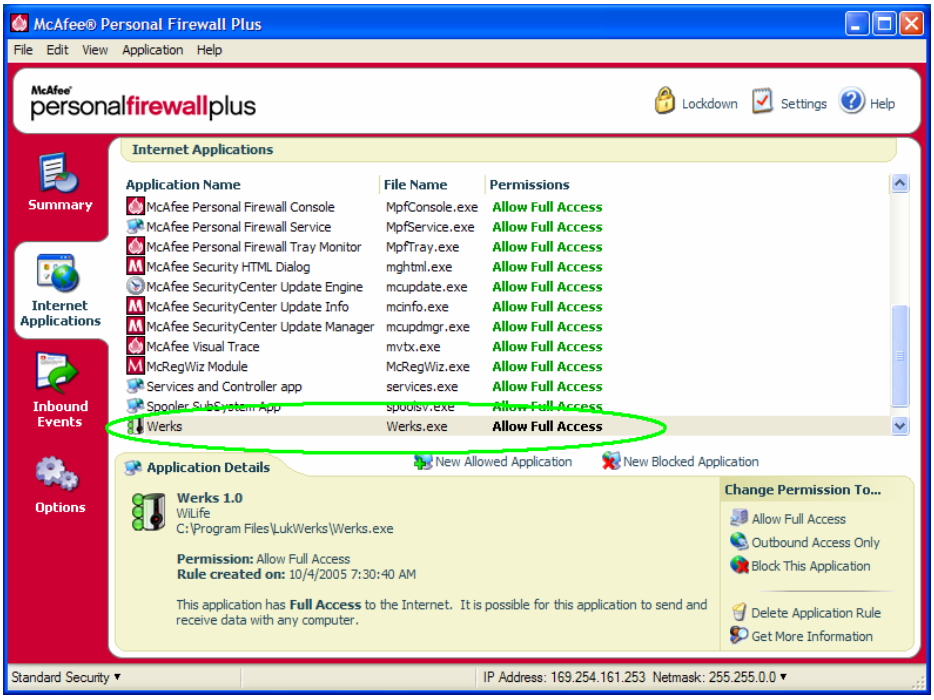


From the Internet Applications page, click the “New Allowed Application” link to open the Select Application dialog. Now enter “C:\Program Files\LukWerks\Werks.exe” in the File name field, and click Open.





Finally, you can confirm that Werks is in the Internet Applications list and marked as “Allow Full Access” along with other networked applications.


McAfee® Personal Firewall Plus
File Edit View Application Help
personalfirewallplus
Lockdown Settings Help
Summary
Internet Applications
Inbound Events
Options
Internet Applications
Application Name File Name Permissions
McAfee Personal Firewall Console MpfConsole.exe Allow Full Access
McAfee Personal Firewall Service MpfService.exe Allow Full Access
McAfee Personal Firewall Tray Monitor MpfTray.exe Allow Full Access
McAfee Security HTML Dialog mghtml.exe Allow Full Access
McAfee SecurityCenter Update Engine mcupdate.exe Allow Full Access
McAfee SecurityCenter Update Info mcinfo.exe Allow Full Access
McAfee SecurityCenter Update Manager mcupdmgr.exe Allow Full Access
McAfee Visual Trace mvtx.exe Allow Full Access
McRegWiz Module McRegWiz.exe Allow Full Access
Services and Controller app services.exe Allow Full Access
Spooler SubSystem App spoolsv.exe Allow Full Access
Werks Werks.exe Allow Full Access
Application Details
New Allowed Application
New Blocked Application
Werks 1.0
WiLife
C:\Program Files\LukWerks\Werks.exe
Permission: Allow Full Access
Rule created on: 10/4/2005 7:30:40 AM
This application has Full Access to the Internet. It is possible for this application to send and receive data with any computer.
Change Permission To...
Allow Full Access
Outbound Access Only
Block This Application
Delete Application Rule
Get More Information
Standard Security
IP Address: 169.254.161.253 Netmask: 255.255.0.0

You have now successfully configured McAfee, but remember that you may have more than one firewall application running on your PC. You need to disable or configure each one.

Finally, you may need to exit Werks (from the task icon) and restart for the changes to take effect.

BlackICE Firewall

BlackICE is the least friendly of all the firewalls we review here. There are two common implementations of BlackICE: those that have purchased a retail copy of PC Protection Firewall for personal use and those that unknowingly have a copy installed along with either software from an ISP, VPN, or other source. The primary difference between the two is this: The retail (full package) version of BackIce includes a user-interface for making changes. Copies installed with other software have no user interface and require editing a file in order to unblock traffic.

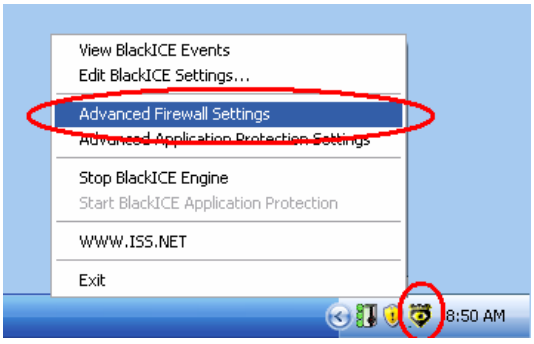
Unlike most firewalls, BlackICE does NOT automatically prompt users for permission to allow Werks to access the cameras and Internet.

Enable Werks with BlackICE UI

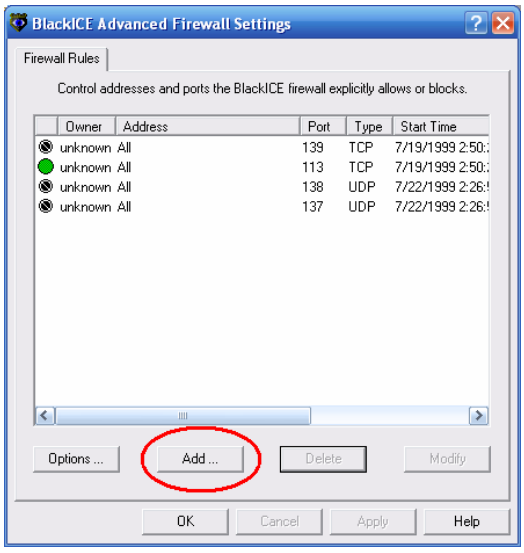
If you have the full retail version of BlackICE you will have access to its somewhat crude user interface (UI). If you do not have access to the UI, jump forward to the section on Enabling Werks with BlackICE Options File.

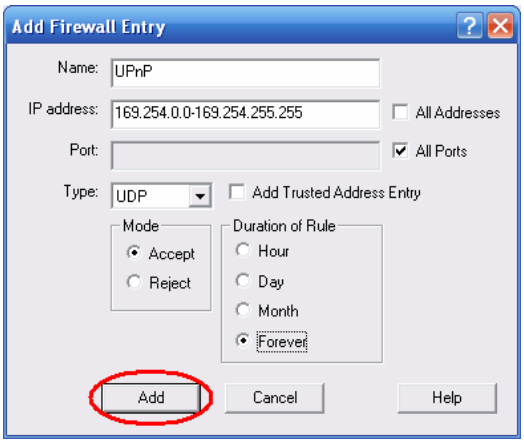
Follow these instructions when using the BlackICE UI:

1) Open the BlackICE Advanced Firewall Settings dialog by right clicking on the BlackICE icon in the task tray (as shown).



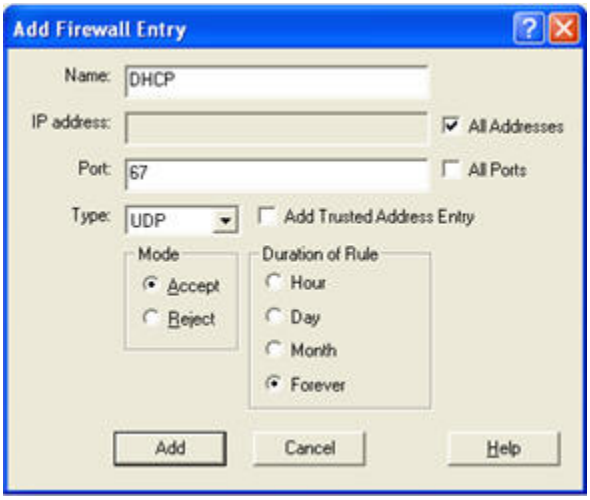
2) On the Advanced Firewall Settings dialog, click the Add button. Next, enter the values shown (Name: UPnP; IP Address: 169.254.0.0-169.254.255.255; Check All Ports; Type:UDP; Mode: Accept; Duration of Rule: Forever) and click Add.



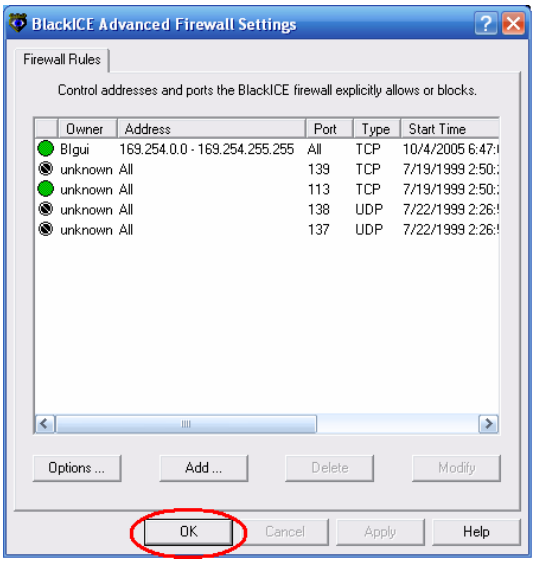


3) Click the Add button again. Enter the values shown: (Name: UPnP; IP Address: 172.29.0.0-172.29.255.255; Check All Ports; Type:UDP; Mode: Accept; Duration of Rule: Forever) and click Add.

4) Click the Add button again. Enter the values shown: (Name: DHCP; IP Address: All Addresses; Port: 67; Type: UDP; Mode: Accept; Duration of Rule: Forever) and click Add.



5) Click OK to close each of the open dialogs.



You have now successfully configured BlackICE, but remember that you may have more than one firewall application running on your PC. You need to disable or configure each one.

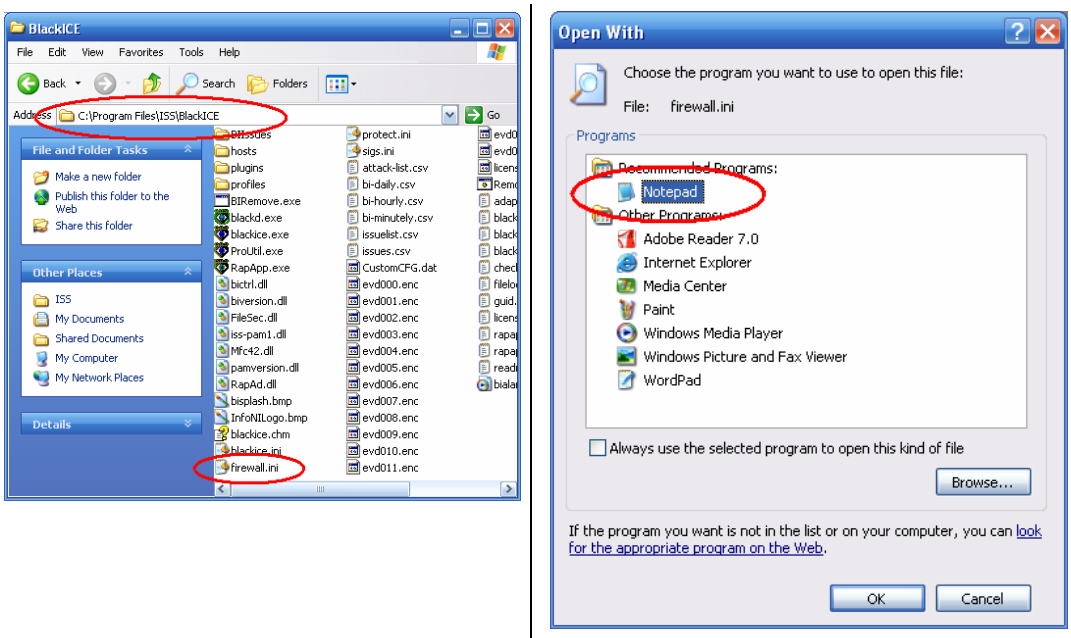
6) Finally, you will need to exit Werks (from the task icon) and restart.

Enable Werks with BlackICE Options File

If you do not have the BlackICE user-interface (UI), you need to edit the BlackICE Options file. Follow these instructions to update the file:

1) Open an explorer window by clicking on the My Computer icon and change directories to c:\program files\ISS\BlackICE.

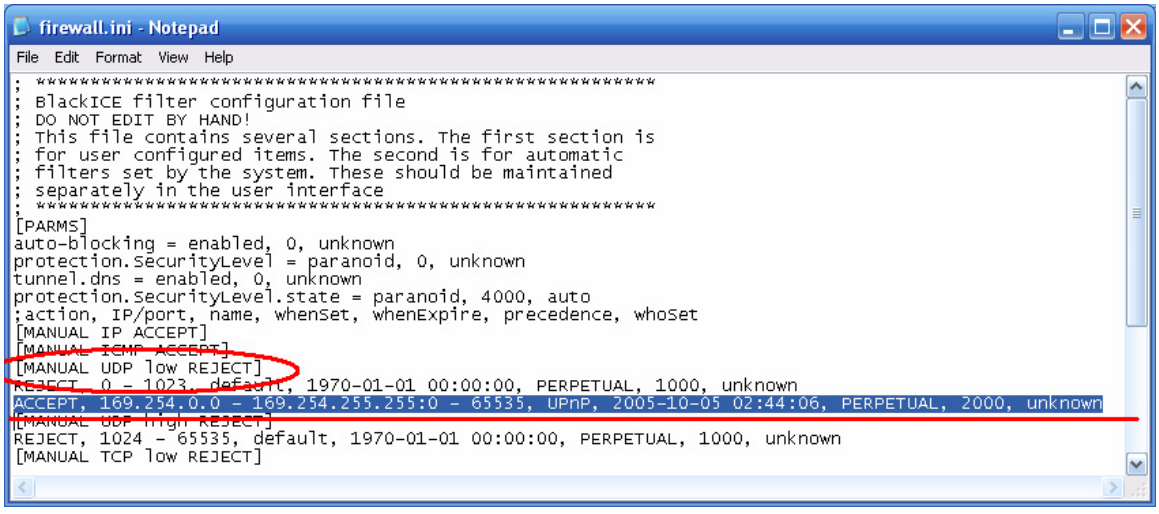
Open the file firewall.ini with Notepad by double-clicking on the file.



2) Find the [Manual UDP low REJECT] section and add these lines:

ACCEPT, 169.254.0.0 - 169.254.255.255, 0 - 65536, UPnP, 2005-10-05, 02:44:06, PERPETUAL, 2000, unknown

ACCEPT, 172.29.0.0 - 172.29.255.255, 0 - 65536, UPnP, 2005-10-05, 02:44:06, PERPETUAL, 2000, unknown


firewall.ini - Notepad
File Edit Format View Help
; **
; BlackICE filter configuration file
; DO NOT EDIT BY HAND!
; This file contains several sections. The first section is
; for user configured items. The second is for automatic
; filters set by the system. These should be maintained
; separately in the user interface
; **
[PARMS]
auto-blocking = enabled, 0, unknown
protection.SecurityLevel = paranoid, 0, unknown
tunnel.dns = enabled, 0, unknown
protection.SecurityLevel.state = paranoid, 4000, auto
;action, IP/port, name, whenSet, whenExpire, precedence, whoSet
[MANUAL IP ACCEPT]
[MANUAL ICMP ACCEPT]
[MANUAL UDP low REJECT]
REJECT, 0 - 1023, default, 1970-01-01 00:00:00, PERPETUAL, 1000, unknown
ACCEPT, 169.254.0.0 - 169.254.255.255:0 - 65535, UPnP, 2005-10-05 02:44:06, PERPETUAL, 2000, unknown
[MANUAL UDP high REJECT]
REJECT, 1024 - 65535, default, 1970-01-01 00:00:00, PERPETUAL, 1000, unknown
[MANUAL TCP low REJECT]

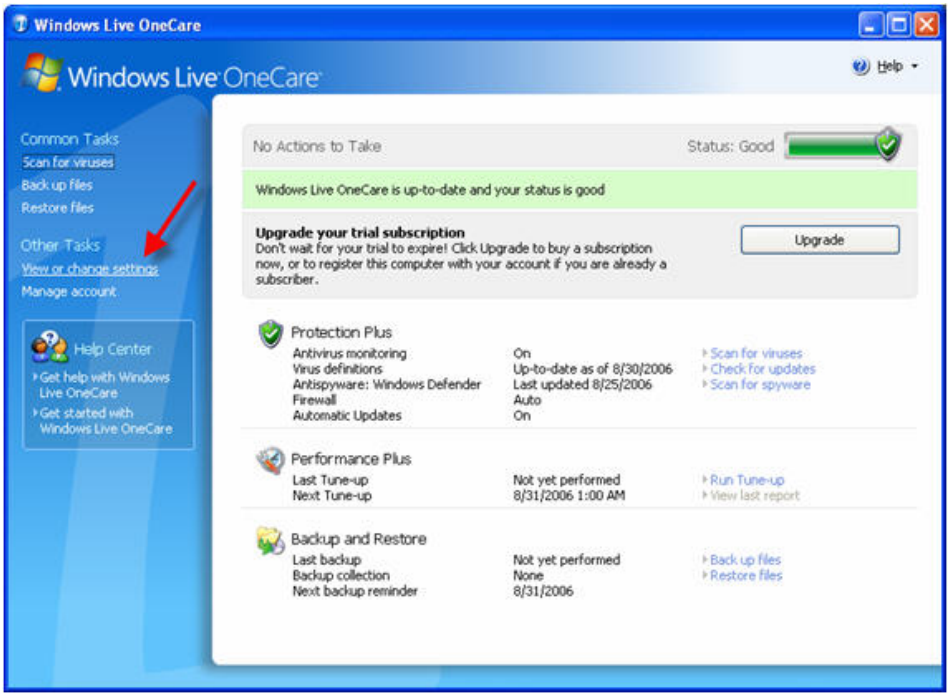
3) Save and close Notepad.

4) Finally, shutdown and restart your computer in order for these changes to take effect.

Windows Live OneCare

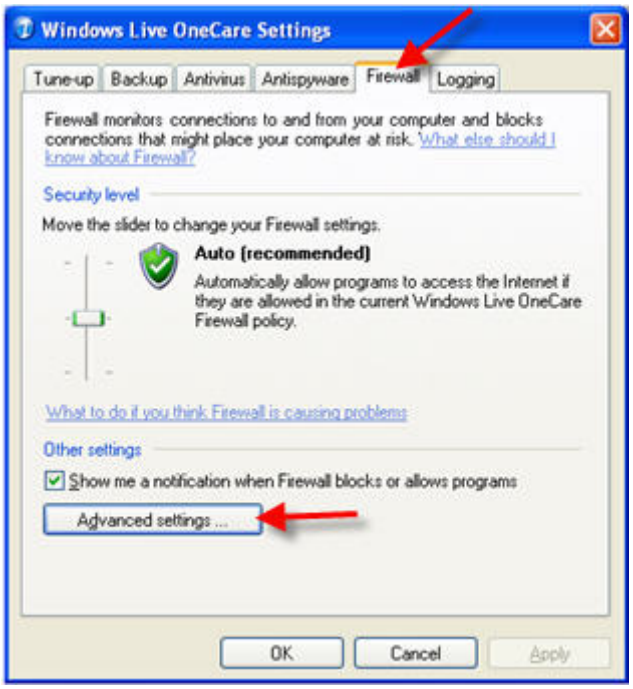
If your PC is running the Windows Live OneCare firewall, your Werks system may not be displaying video, even if you placed Werks on the Allow List. If Werks is not displaying video, follow these instructions to resolve it:

1. Open the Windows Live OneCare system. The Common Tasks screen displays, as shown in this graphic.

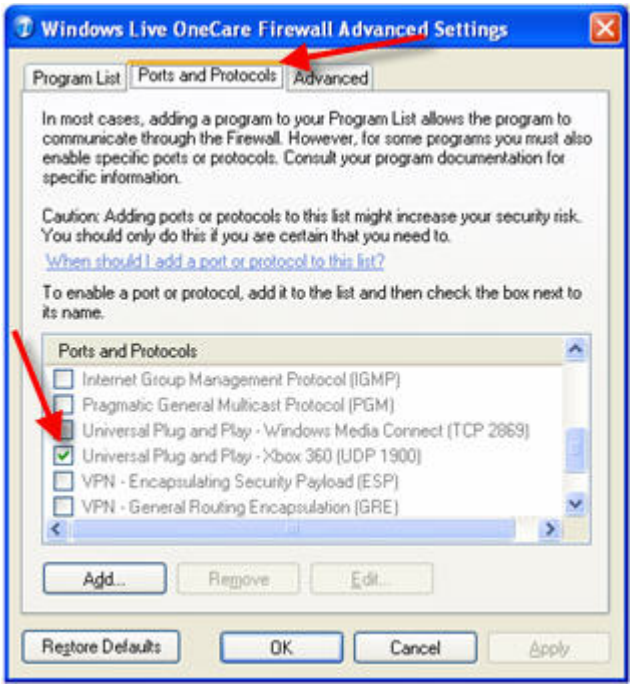


2. Click the option “View or change settings.” (See red arrow.)

3. With the Settings window open, click on the Firewall tab and then click Advanced Settings, as shown in the graphic below.


Windows Live OneCare Settings
Tune-up
Backup
Antivirus
Antispyware
Firewall
Logging
Firewall monitors connections to and from your computer and blocks connections that might place your computer at risk. What else should I know about Firewall?
Security level
Move the slider to change your Firewall settings.
Auto (recommended)
Automatically allow programs to access the Internet if they are allowed in the current Windows Live OneCare Firewall policy.
What to do if you think Firewall is causing problems
Other settings
Show me a notification when Firewall blocks or allows programs
Advanced settings ...
OK
Cancel
Apply

4. Click on the Ports and Protocols tab.


Windows Live OneCare Firewall Advanced Settings
Program List
Ports and Protocols
Advanced
In most cases, adding a program to your Program List allows the program to communicate through the Firewall. However, for some programs you must also enable specific ports or protocols. Consult your program documentation for specific information.
Caution: Adding ports or protocols to this list might increase your security risk. You should only do this if you are certain that you need to.
When should I add a port or protocol to this list?
To enable a port or protocol, add it to the list and then check the box next to its name.
Ports and Protocols
Internet Group Management Protocol (IGMP)
Pragmatic General Multicast Protocol (PGM)
Universal Plug and Play - Windows Media Connect (TCP 2869)
Universal Plug and Play - Xbox 360 (UDP 1900)
VPN - Encapsulating Security Payload (ESP)
VPN - General Routing Encapsulation (GRE)
Add...
Remove
Edit...
Restore Defaults
OK
Cancel
Apply

5. In the Ports and Protocols section, locate the “Universal Plug and Play – Xbox 360 (UDP 1900) checkbox and select it so that it is marked. Then, hit the Apply button.

The video from your cameras should show up in Werks shortly after this.

Turning Off Spam Blocking for LukWerks Emails

If you are not receiving LukWerks alert emails, it may be due to your email service blocking the emails because it considers them to be spam. Locate and open the SPAM folder (or Junk E-Mail, Bulk, or a similar name), if you feel that our emails are being blocked.

Note: If our alert emails are not appearing in these locations, contact your provider to troubleshoot further.

We've included instructions for some of the more popular email systems. These instructions assist you with unblocking LukWerks alert emails.

Unfortunately, these instructions do not cover every email service. If your email provider is not listed below, google your mail service on an Internet browser and locate spam options in the Help or Options documentation on the email provider's website.

AOL (AIM)

AOL places SPAM and junk mail automatically in the "SPAM" folder.

If LukWerks alert messages get placed in the SPAM folder, you can move them to the Inbox by clicking on the checkbox next to the alert message, and then clicking on the "This is Not Spam" button at the top of the message list.

EarthLink Total Access and Web Mail

Both Total Access and Web Mail use EarthLink's spamBlocker tool. When this is activated, spam email is placed in either the "Known Spam" or "Suspect Email" folders.

If LukWerks alert messages get placed in either of these folders, they can be easily accepted as non-spam by opening either folder, clicking in the checkbox next to the alert message, and going to the Checked Items dropdown field and selecting the option "Move to Inbox & Add Contact."

EarthLink 5.0

EarthLink has two spam filter options available for 5.0-- Standard Spam Sentry Junk Mail Filter and Aggressive Spam Sentry Junk Mail Filter.

With Standard Spam Sentry Junk Mail Filter activated, EarthLink places SPAM in the "Junk Mail" folder.

If LukWerks alert messages are not displaying in the Inbox, check the "Junk Mail" folder. To get alert messages to display in the Inbox, add the outgoing mail server name (i.e. smtp.wilife.com) to your Address Book.

If you are not receiving any alert messages, and you don't see a Junk Mail folder, your spam filter may be set to "Aggressive Spam Sentry Junk Mail Filter." Any mail sent to you that is not from email addresses in your address book is immediately destroyed. You won't ever know the mail was sent to you.

HotMail

HotMail places SPAM in the "Junk" folder. Spam filtering is automatic. All spam-possible email is automatically sent to the Junk E-Mail folder, where it is automatically deleted after 5 days.

To set HotMail so that it sends LukWerks alert mail to the Inbox folder in the future, you can complete one of these two tasks:

1. Click Options > Mail and Junk e-mail > Allowed and Blocked Senders > Allowed Senders. In the field "Sender or domain to allow:", type the outgoing mail server name (i.e., smtp.wilife.com). This server name is the same one that you specified in the Setup > Email tab screen > Outgoing Mail Server field.

2. Open the Junk folder and open one of the LukWerks alert emails. Click on the option "Allow Sender."

Yahoo Mail

Yahoo Mail places SPAM in the “Bulk Mail” folder. Yahoo uses a mail filtering system called SpamGuard, which is automatically activated. The Bulk Mail folder is generated when you receive your first message that appears to be spam. Spam is automatically deleted after 30 days.

If a LukWerks alert message is placed in your Bulk Mail folder, click on the "Not Spam" button while viewing that message.

GMail

GMail places SPAM in the "Spam" folder. All SPAM is automatically sent to the Spam folder, where it is automatically deleted after 30 days.

If an alert message is found in the Spam folder, click in the checkbox for the alert email and click the “Not Spam” button along the top of the spam list. You can also open the alert message and click the “Not Spam” button at the top of the message. Unmarking messages moves them to your inbox.

To prevent LukWerks alert email from being marked as spam, add the outgoing mail server name (i.e., smtp.wilife.com) as a Contact. This server name is the same one that you specified in the Setup > Email tab screen > Outgoing Mail Server field.

In the Contacts list, click Add Contact. GMail always delivers messages from your contacts.

Microsoft Outlook 2003

Outlook does not have built-in SPAM control, but it can automatically block messages from appearing from specific addresses by adding these addresses to its "Junk Senders" list.

To Unblock LukWerks alert messages or to add a sender to your Safe Senders List, right-click on an alert message. Click either Add Sender to Safe Senders List.

Microsoft Outlook Express 6

Outlook Express 6 does not have built-in SPAM control, but it can automatically block messages from appearing from specific addresses. To Unblock WiLife alert messages, choose Tools > Message Rules > Blocked Senders List.

Scroll through the list that appears and highlight the address representing the Outgoing Mail Server name that you specified for Werks alert messages (i.e. smtp.wilife.com). Then, click the Remove button, then OK.

Eudora

Eudora places SPAM in the "Junk" folder. They call their filtering feature "Spamwatch."

To tell Eudora not to send LukWerks alert mail to the Junk folder, highlight the message found in the Junk folder, and choose “Not Junk” from the Message menu. In time, Eudora will learn that these alert messages are not junk and will not place them in the Junk mailbox.

Mozilla Thunderbird 1.5

Mozilla Thunderbird places SPAM in the "Junk Mail" folder.

To tell Thunderbird to not send LukWerks alert mail messages to the Junk folder in the future, highlight the LukWerks alert email and click the “Not Junk” button in the toolbar. You can also use the keyboard keys [Ctrl] + J or choose “Mark As Not Junk” from the Message menu.

If Thunderbird continues to consider messages from LukWerks to be Junk Mail, add the outgoing mail server name (i.e., smtp.wilife.com) to the Address Book. This server name is the same one that you specified in the Setup > Email tab screen > Outgoing Mail Server field.

By default, addresses in the Address Book are not considered Junk Mail.

Opera M2

Opera M2 places SPAM in the “Spam” folder. To access email messages in this view, toggle the Hotlist by pressing F4, and double-click on "Spam."

To get a LukWerks alert message out of this folder, right-click on the alert message and then select the "Not Spam" option. You can also highlight the message and then select the “Not Spam” button (or highlight the message and press “A”). This will add the sender to your contacts list so future messages from that e-mail address will not be sent to the "Spam" folder.

A

Specifications

System Computer Requirements

LukWerks requires these minimum requirements for proper operation. Additionally, we recommend a more powerful machine to achieve the best results.

Requirement		Number of Cameras					
		1	2	3	4	5	6
CPU Speed	Minimum Recommended	1.0 GHz 1.4 GHz	1.2 GHz 1.6 GHz	1.4 GHz 2.0 GHz	1.6 GHz 2.4 GHz	1.8 GHz 2.6 GHz	2.0 GHz 3.0 GHz
Memory (MB)	Minimum Recommended	256 384	384 512	512 512	512 768	512 768	512 1024
Video Card (MB) DirectX 9 compatible Latest video driver	Minimum Recommended	32 32	32 32	32 64	64 128	64 128	128 256
Display Resolution:		1024 x 768 or higher, 32 bit color					
Hard Drive (MB):		100 MB for program and a minimum of 500+ MB for video recording					
Operating System:		Microsoft® Windows® 2000; Microsoft® Windows® XP Home Edition, XP Professional, or XP Media Center Edition					
USB:		One free USB 1.1 or 2.0 port (2.0 recommended)					
Media Player:		Microsoft Windows Media® Player 9 or later					
Other:		CD ROM drive for installation					

* Minimum and recommended requirements for systems running cameras using the default QVGA (320 x 240) settings. Running your cameras in the higher VGA (640 x 480) mode requires additional CPU.

LukWerks uses your Windows PC to record the video from your cameras and to serve video to your remote devices. You need to have your PC on and running for the LukWerks system to operate.

Remote Viewing Requirements

LukWerks provides for remote viewing using Windows Mobile cell phones and handhelds, and Web Browsers.

Cell Phones & Handhelds

LukWerks is compatible with a wide range of Microsoft Windows Mobile cell phones and wireless handhelds. Of course, these devices require Internet access either through a cell service provider or wireless Internet hub, depending on your device.

Examples of Compatible Cell Phones:

Anextek SP230	Palm Treo 700w
Audiovox PPC 6601; SMT 5600; PPC 4100;	Motorola Q; CN620; Motorola MPx, MPx100 & MPx220;
HP iPAQ hw6500 series	Samsung SCH-i730
iMate SP5; SP5m; K-JAM; JASJAR	Siemens SX66

Example Wireless Handheld Devices:

Asus MyPal A730W	HP iPAQ hx2400 series; hx2700 series; hx3700 series; hx4700 series
Dell Axim X51v; X50v; X30v	Toshiba e805

BROWSER

Common Requirements	Windows Media Player 9 or later
Browsers	Microsoft Internet Explorer Version 5.5 or later

DVC-810i Camera

INDOOR CAMERA FEATURES

Processing Power	400 MHz DSP
Onboard Image Encoding	Windows® Media Video 9
Onboard Image Processing	Motion detection up to 16 zones, Auto brightness,
Resolution	Selectable: 320 X 240 or 640 X 480 pixels
Frame Rate	Selectable: 5, 10 or 15 frames/second
Bit Rate	Selectable: 150, 400 and 750 kbps
Color Depth	10 bits
Lens	
Focus	User-adjustable
Viewing Angle	80° (diagonal)
Pan Angle	50° (manual)
Firmware Updates	Selectable: Manual or Automatic
Communications (to power supply)	Ethernet; TCP/IP
Power Consumption	15 Watts

OPERATING ENVIRONMENT

The DVC-810i Luk Camera meets requirements for indoor use and is not qualified for outdoor or other extreme environments.

Temperature Range	
Operating	+32°F to +93°F (0°C to +34°C)
Storage	-4°F to +140°F (-20°C to +60°C)
Humidity (storage and operating)	5% to 90% (relative; non-condensing)
Voltage	102 - 132 Volts AC, 60 Hz
Power supply to Camera cabling	

Included cable	CAT-5e, RJ-45 connectors, 10 feet (3 m)
User provided requirements	CAT-5e or better, RJ-45 connectors, up to 80 feet (24 m)
Connector pin out	Per IEEE 802.3
Illumination	2 lx minimum per IEC 61146-1
Property Size	Up to 8,000 square feet

Physical Metrics

Power Consumption	15 Watts
Camera Body Dimensions	Height: 5.0 inch (12.7 cm); Width 3.2 inch (8.1 cm); Depth: 1.8 inch (4.6 cm)
Camera Weight	6.7 oz (190 g)
Power Supply Dimensions	Height: 3.8 inch (9.7 cm); Width: 2.9 inch (7.4 cm); Depth: 2.6 inch (6.6 cm)
Power Supply Weight	5.6 oz (160 g)

DLC-810e Camera

Outdoor Camera Features

Processing Power	400 MHz DSP
Onboard Image Encoding	Windows® Media Video 9
Onboard Image Processing	Motion detection up to 16 zones, Auto brightness,
Resolution	Selectable: 320 X 240 or 640 X 480 pixels
Frame Rate	Selectable: 5, 10 or 15 frames/second
Bit Rate	Selectable: 150, 400 and 750 kbps
Color Depth	10 bits
Lens	
Focus	Preset
Viewing Angle	80° (diagonal)
Pan Angle	50° (manual)
Firmware Updates	Selectable: Manual or Automatic
Communications (to power supply)	Ethernet; TCP/IP
Power Consumption	15 Watts

Operating Environment

Temperature Range	
Operating	0° to 111° F (-18° to 44° C)
Storage	-4°F to +140°F (-20°C to +60°C)
Humidity (storage and operating)	5% to 95% (relative; non-condensing)
Voltage	85 - 265 Volts AC, 45 to 66 Hz
Property Size	Up to 8,000 square feet

PHYSICAL METRICS

Power Consumption	20 Watts
Camera Body Dimensions	Height: 2.0 inch (50 mm); Width 4.72 inch (120 mm); Depth: 8 inch (200 mm)
Camera Weight	11 lb (500 g)

Powerline Networking

LukWerks uses powerful power-line networking technology to allow users to easily install and setup your surveillance system.

Networking specification	HomePlug® Power-line 1.0
Data Rate	14 Mbps (maximum), 5 Mbps (typical)
Data Encryption	56 bits (standard DES)
Security Key	Coded user defined password
Networking protocol	TCP/IP
Camera discovery	Universal Plug and Play (UPnP)
IP Address Space	169.254.0.1 – 169.254.255.255, Mask 255.255.0.0

Wall and Ceiling Mount Installation

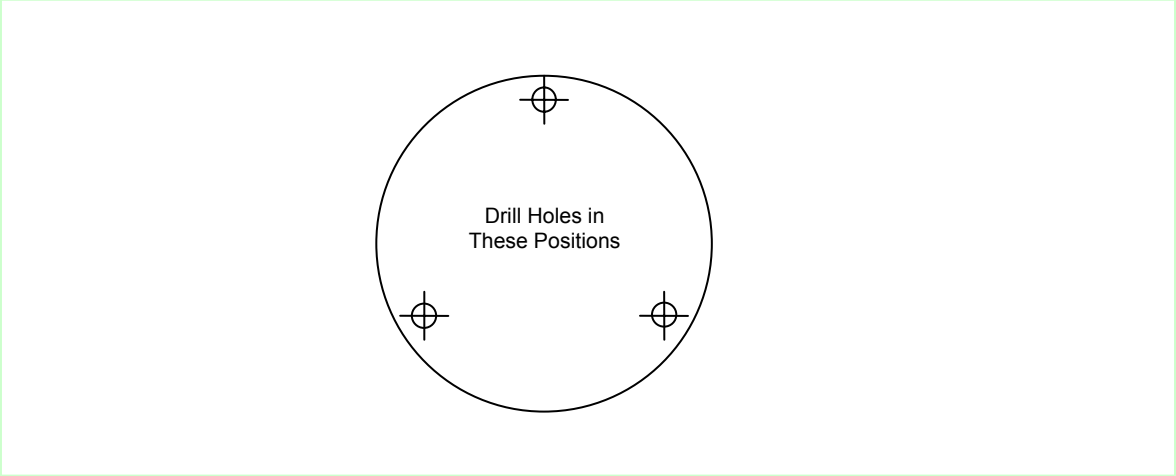
Installing the Luk Camera Wall and Ceiling Mount is simple. Use the recommended tools and drilling template below. As always, use caution to avoid injury.

Recommended tools: Screwdriver, electric drill.

Surface	Pilot Hole Drill Size	Pilot Hole Depth
Softwood	**1.6 mm (1/16")**	**1.2 cm (1/2"0**
Hardwood	**2.0 mm (5/64")**	**1.2 cm (1/2")**
Wallboard (use anchor)	**5.0 mm (3/16")**	**2.3 cm (7/8")**

Pre-drill pilot holes before securing the camera to the surface. For soft, hollow surfaces such as wallboard, sheet rock and drywall, use the provided plastic anchors.

WALL MOUNTING DRILLING TEMPLATE



The illustration is drawn to a one-to-one scale, which means it provides the exact dimensions required to mount the unit.

B

Software License and Hardware Warranty

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OBTAINING WARRANTY SERVICE

Please review the customer support resources referred to in the accompanying documentation before seeking warranty service. If the product is still not functioning properly after making use of these resources, access the online website: www.lukwerks.com/support for instructions on how to obtain warranty service. If limited warranty service is required, WiLife will issue a Return Material Authorization Number. You must ship the products back to WiLife in their original or equivalent packaging, prepay shipping charges, and insure the shipment or accept the risk of loss or damage during shipment. WiLife will ship the repaired or replacement products to you freight prepaid if you use an address in the continental United States, where applicable. Shipments to other locations will be made freight collect.

C

Regulatory and Safety

Regulatory Information

Radio Frequency Interference

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. Users of this equipment are cautioned that changes or modifications to this equipment not expressly approved by WiLife Inc. void the user's authority to operate this equipment.

Industry Canada Notice

Complies with IC: ICES-006 and ICES-003: en conformité avec IC: NMB-006 et NMB-003

Lead Content

This equipment complies with Sections 25249.5 – 25249.13 of the California Health and Safety Code. The rubberized items of this equipment, which the user would come in frequent contact (cables/cords, suction cups, etc.), have lead content no greater than 0.03% (300 ppm).

Safety Information

Please read the information in this section carefully and make sure you understand it completely. Make certain that all warnings and instructions in this manual and marked on the system components are carefully followed.

Cleaning

Unplug this system from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning. Make certain the components are completely dry before inserting into the wall outlet after cleaning.

Electric Shock Hazard

When properly installed and configured, the LukWerks equipment is designed to protect users from exposure to hazardous voltage levels. This system should only be operated from the type of power source indicated in this guide and on the system's label. If you are not sure of the type of power supplied to your home or building, consult your local power company. There are no user serviceable components within any of the equipment enclosures. Users should not attempt to repair LukWerks equipment. Malfunctioning equipment should be serviced using the guidelines found in this manual. If an enclosure does accidentally come open, remove the power to the unit before handling it in any way.

Lightning also presents a real, but unlikely source of hazardous electric shock. As with all electrical equipment, it is best to unplug the LukWerks components during an electrical storm. This is especially recommended for Luk Cameras mounted on exterior windows. If the LukWerks equipment is installed in an area subject to frequent electrical storms, equipment damage and user exposure to hazardous voltages can be minimized by the proper installation of lightning rods and lightning arrestors. Please contact a licensed electrician for further assistance.

Unplug the system from the wall outlet and refer servicing to a qualified service facility under the following conditions:

- When the AC plug is damaged
- If liquid has been spilled into the system
- If the system has been exposed to rain or water
- If the system does not operate normally by following the operation instructions
- If the system has been dropped or the enclosure has been damaged
- If the system exhibits a distinct change in performance
- If the system emits smoke or odors
- If the system emits any audible sound

Protection against Physical Shock

Reasonable care should be taken to minimize the possibility of LukWerks components experiencing physical shock. Because of its many mounting configurations, the Luk camera is particularly vulnerable to damage by falling. Use the following guidelines to protect the Luk Camera:

- Do not place the camera in an area where it will be exposed to solvents, caustic gasses, or strong air currents.
- Do not place the camera in an area where it can become dislodged by bumping, knocking, striking, or other physical forces.

Window Mount (Suction Cups)

- Place suction cup only on a flat, clean, dry window, or glazed surface.
- Ensure the camera cable is routed in such a way as to preclude its accidental pulling the camera off the window.

Desktop/Shelf Mount

- Place the mount on a stable, flat, clean, dry surface, well away from any edge.
- Ensure the camera cable is routed in such a way as to preclude accidental pulling the camera off the desk or shelf where it is placed.

Wall/Ceiling Mount

- Affix the mount to the wall or ceiling using the instructions provided in this manual.
- Ensure the camera cable is routed in such a way as to preclude accidental pulling the camera off the wall or ceiling.

If, after falling, the camera exhibits degraded performance, has ceased operating, shows visible cracks or if there is evidence that internal components have come loose, disconnect the camera from its cable and follow the instructions in this manual for obtaining service repair.

Exposure to Moisture

The LukWerks Indoor and Spy cameras are designed to be used only in dry, indoor environments. Do not use them near water; for example, near a bath tub, washbowl, kitchen sink, or laundry tub, in a wet basement, or in or near a swimming pool. Exposure to rain, mists, excessive humidity and liquid emersion will likely cause significant degradation in system performance and utility. If any LukWerks component has been exposed to moisture, immediately unplug all components from power outlets and allow the components to dry completely before attempting to reinstall the equipment. If, after drying, the system exhibits degraded performance, disconnect the system from all power sources and follow the instructions in this manual for obtaining service repair. The LukWerks Outdoor Camera, on the other hand, is weatherproof and protected against water and temperature extremes.

Fire Hazards

Care should be taken to keep LukWerks equipment and packing material away from open flames and temperatures in excess of 34°C (93°F). Care should be taken to keep electrically conductive objects from falling between the Luk camera power supply and the LukWerks HomePlug®/USB Bridge and the wall plug, potentially shorting out the AC power and causing a fire. If the case of any LukWerks equipment becomes open, cracked or broken in any way disconnect the power source to the component and refer to the service repair section of this manual.

Sharp Edges

Under normal circumstances LukWerks system components are safe to handle. If the LukWerks components are exposed to significant physical shocks, the LukWerks enclosures could break open exposing sharp enclosure edges and sharp internal component edges. In the event of enclosure breakage, carefully remove affected components from their power source and follow the service procedures of this manual.

Choking, Suffocation and Strangulation Hazards

Care should be taken to keep LukWerks equipment and packing material away from small children and persons with diminished mental capability. Specifically, the camera lens might be unscrewed and accidentally swallowed. The wall/ceiling mount screws and anchors could be accidentally swallowed. The LukWerks cables could also be accidentally swallowed or become wrapped about a neck. If the LukWerks components are exposed to significant physical shocks, the LukWerks enclosures could break open and small internal components could come loose and become a choking risk. Plastic packing material may present a suffocation hazard to small children and persons with diminished mental capability. Please properly dispose of all packing material.

Use with Third Party Devices

Do not plug the LukWerks cables into any device other than the intended LukWerks components. Doing so could damage the equipment and expose the user to fire and electrical shock hazards. The LukWerks equipment is specifically NOT compliant with “power over Ethernet” standards such as IEEE 802.3af.

VENTILATION

Keep the area around LukWerks components free of materials that may obstruct airflow and proper ventilation of the components. This system should never be placed near or over a hot radiator or heat register. This system should not be placed in a built-in installation unless proper ventilation is provided.

ENVIRONMENTAL HAZARDS

Please properly dispose of LukWerks packing materials. Cardboard, paperboard and plastic packing material can be recycled. Please consult your local recycling center for details. Burning this material is not recommended as it may release harmful chemicals into the environment.

PROLONGED USE OF EQUIPMENT

As with all equipment, care should be taken to minimize the risk of repetitive motion injuries, muscle fatigue, prolonged muscle inactivity and eye strain. Repetitive motion injuries may be caused by common LukWerks activities such as typing and computer mouse use. Avoid spending excessive time viewing live or recorded video. Werks software can be configured to notify you remotely when an event happens so constant personal surveillance is unnecessary. Recorded playback can be time selected, skipped to or fast-forwarded to quickly reach a point of interest. Make sure your PC workstation (including chair) is comfortably configured and properly illuminated. Place your PC's keyboard, mouse and display at a comfortable, strain minimizing height. Adjust the brightness and contrast of your PC's display to a comfortable level.

STATIC ELECTRICITY

All electronic equipment contains components that can malfunction, suffer reduced reliability or be damaged in the presence of static electricity. While this equipment has been designed to minimize performance degradation due to effects of static electricity, please use the following procedures when handling this equipment:

- Do not wear clothing that readily generates static electricity (synthetic materials generate large amounts of static electricity). Cotton or cotton blend fabrics, for example, are good because they are not as likely to store electrostatic charges.
- Keep all plastic items away from any area where this equipment is handled. Any plastic item is a potential static generator. This includes candy wrappers, foam cups, synthetic carpet, foam cushions, etc.
- Avoid activities that produce static such as wiping feet or putting on coats when in the vicinity of this equipment.
- Always discharge any static charge your body might have built up before touching any part of this equipment. To do this, touch and hold a grounded metal object for a minimum of two seconds.
- If storing this equipment for a prolonged period of time, return it to its original shipping container.

If this equipment ceases operation suddenly and static electricity exposure is suspected, unplug all connections for at least five seconds and then reinstall these connections. If this does not restore equipment operation, consult the troubleshooting section of this manual.

Use with Power Conditioning Equipment

The LukWerks cameras and USB receiver should not be used with any type of power conditioning equipment such as surge protectors (commonly found in 'power strips'), AC line filters, AC line conditioners, voltage converters, frequency converters, uninterruptible power sources (UPS), spike protectors, AC line voltage regulators and motor-generator sets. Such equipment will likely block power-line network signals and render the LukWerks system inoperable.

Powerline Network Limitations

This equipment will not operate during a power outage.

For best performance, limit your HomePlug network to 15 total devices. The presence of electric motors, fluorescent lights, halogen lamps, switching power supplies and dimmer switches on your network may diminish HomePlug® network performance. Avoid the use of extension cords with your HomePlug® devices. HomePlug® signals will not reliably pass through transformers or between different phases of a multi-phase power circuit. Operation between two legs of split phase power circuit should be satisfactory. If you have any questions about your specific electrical wiring topology, please consult a licensed electrician.

If your HomePlug®/USB Bridge is unable to connect to a Luk Camera, or if camera performance is unsatisfactory, try moving the camera's power supply module to a different electrical outlet.

If you suspect non-LukWerks equipment may be interfering with the operation of the LukWerks system (i.e. the LukWerks system only operates when the other equipment is turned off) placing a low-pass power line filter between the AC line and the non-LukWerks equipment may resolve the problem.

To protect your privacy, be sure to set a unique password via the LukWerks software. Doing this encrypts your camera data and makes the output unreadable by neighboring HomePlug® systems which may be able to detect your signals.